Bay Area Transportation State of the System 2005

METROPOLITAN TRANSPORTATION COMMISSION and CALTRANS DISTRICT 4

Bay Area Transportation:
State of the System
2005

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Table of Contents

Metropolitan Transportation Commission (MTC)

MTC is the transportation planning, coordinating and financing agency for the nine-county San Francisco Bay Area. The agency also helps to monitor and — in concert with Caltrans and others — to improve the operation of the regional transportation network.

Caltrans District 4

Caltrans District 4 is the operating arm of the California Department of Transportation (Caltrans) for the nine-county San Francisco Bay Area. Caltrans is responsible for the planning, design, construction, maintenance and operation of the state highway system (and the Interstate Highway System in California), and is the state's overall manager of interregional transportation services.

To Users of the Bay Area Transportation System

We are pleased to present *Bay Area Transportation: State of the System 2005,* a digest of key data on the performance of the region's transportation network and facilities. In this report, the Metropolitan Transportation Commission (MTC) and Caltrans District 4 have joined forces to compile, display and briefly comment on statistics that reveal how the Bay Area transportation system is performing and how travel conditions are changing. Taken together, the many pieces of data included in these pages combine to provide a comprehensive overview of the state of transportation in the Bay Area.

In 2004, the year covered by this report, a strengthening Bay Area economy made its presence felt in several key transportation areas. Examples include:

- a 4 percent climb in vehicle miles driven on the region's freeways, following several years of nearly flat year-over-year tallies (page 3);
- a 2 percent increase in congestion on the region's freeways — reversing a three-year decline kicked off by the dot-com bust at the beginning of the decade (pages 8–11);
- increases in both the number of air passengers and the tonnage of air cargo flying into or out of Bay Area airports (8 percent and 3 percent, respectively), following multi-year declines in both categories (pages 40–41).

However, while the overall appetite for travel clearly was on the rise, the level of transit ridership in the region did not keep pace. Ridership slipped by 1 percent in 2003-04 (the last full year for which statistics are available), falling to the lowest level since 1997-98 (pages 22–23). Fortunately, partial-year results reported by some transit operators in 2005 indicate a reversal of this ridership slide.

On the safety front, we are happy to report that the number of injury and fatal motor vehicle collisions dropped in 2004 for the fourth straight year. The 2004 total is 15 percent lower than the recent high of 40,053 injury and fatal collisions in 2000, and is the lowest of any year in the past 10.

And we note with some concern that the pavement conditions on the Bay Area's 19,000 miles of local streets and roads got a little bumpier in 2004 — as they have in each of the last three years (pages 32–33). This trend suggests Bay Area jurisdictions are not spending the money necessary to maintain the condition of local roadway pavement over time.

We invite you to page through this issue of the *State of the System* report. We hope that you will find its contents informative and useful, and we welcome your comments as to both subject matter and presentation.

On behalf of the Metropolitan Transportation Commission and Caltrans District 4, we thank you for your interest in Bay Area transportation.

Sincerely,

Steve Heminger
Executive Director
Metropolitan Transportation Commission

Bijan Sartipi
District Director
Caltrans District 4

The Transportation System in Brief

In 2004, the Bay Area population surpassed the 7 million mark. These Bay Area residents were on the go, taking more than 21 million trips on an average weekday, or about three trips per person each day in order to get to work, school, shopping or other activities. More than 84 percent of all trips were by automobile. Walking and biking were the next most common ways to get around (10 percent of all trips); naturally, trips made by walking and biking tend to be shorter distances. About 6 percent of all trips were by public transit, and the majority of these trips occurred during commute hours. Over the course of the year, more than 30 billion miles were logged on the region's freeways, and over 475 million transit trips were taken (see table below).

Bay Area residents' appetite for travel increased in 2004, reflecting a strengthening regional economy. Freeway miles driven rose by 4 percent. Regional employment held more or less steady, after three years of decline, while population nudged up 1 percent. The number of transit trips fell slightly from year-earlier levels to a 5-year low.

While the number of jobs in the region has declined and population growth has slowed in the last few years, long-term forecasts assume a rebound. By 2030, the region's population is expected to grow to 8.8 million people, and employment will expand to 5.2 million jobs. MTC predicts the number of trips will grow to 28.5 million each day, increasing wear-and-tear and making other demands on Bay Area roads and transit. MTC's long-range transportation investment strategy for the region, adopted in 2005 as the *Transportation 2030 Plan,* addresses these growing needs. A full 80 percent of the $118 billion in revenues expected over the 25-year plan period would be devoted to basic maintenance needs and ongoing operations. Even that level of investment is not sufficient to fully address the projected maintenance needs. To meet increased travel demands, the *Transportation 2030 Plan* calls for 4 percent of the funds to be spent on low-cost operational improvements that squeeze more efficiency out of the transportation system, and the remaining 16 percent on strategic expansion of the region's transit and roadway network.

Population, Employment and Travel in the Bay Area, 2000–2004

	In Thousands					Percent Change	
	2000	2001	2002	2003	2004	2003–2004	2000–2004
Residents	6,818	6,917	6,956	6,994	7,064	+1%	+4%
Jobs	3,541	3,506	3,334	3,218	3,215	–0.1%	–9%
Vehicle Miles Driven on Freeways	28,654,600	28,996,200	29,190,800	29,278,100	30,346,000	+4%	+6%
Transit Trips	506,107	533,038	514,958	478,587	475,016	–1%	–6%

Sources: California Employment Development Department, California Department of Finance, Caltrans, Metropolitan Transportation Commission

Transit trips data is compiled by fiscal year, e.g., data listed for 2004 represents July 1, 2003–June 30, 2004.

Transit ridership data is provisional. Vehicle miles driven on freeways data for 2004 is provisional.

The Freeway System and State Highway System

The Bay Area's 620-mile freeway system is the workhorse of the transportation network. In 2004, vehicles traveled more than 30 billion miles on Bay Area freeways — about 60 percent of all miles driven by trucks and passenger vehicles in the region. The freeway system includes 323 miles of "diamond lanes" that allow people in carpools, vanpools and buses to bypass congestion during peak commute hours. In 2004, carpool lanes carried 16 percent of the vehicles and 29 percent of the people in the peak commute hour on freeway segments with carpool lanes. This is a slight decrease from 2003, when carpool lanes carried 31 percent of people in the peak commute hour.

A good portion of the region's freeway system is equipped with high-tech devices designed to increase freeway efficiency and better serve travelers. More than 450 miles of freeway are equipped with roadway sensors and video cameras that can detect slow-downs. Travelers can check for freeway delays throughout the region and get point-to-point driving times on 470 miles of the freeway system by calling 511 or visiting the 511.org Web site. In addition, the roving tow trucks of the Freeway Service Patrol cruise along some 458 miles of the most congested freeways and expressways, helping motorists with car trouble, removing debris or quickly clearing accidents.

The region's core freeway system is supplemented by 800 miles of state highways. Most of these state-owned roadways are the major thoroughfares linking communities in the outer suburban and rural parts of the Bay Area. These highways include State Routes 12, 29 and 37 in the North Bay, State Route 4 in eastern Contra Costa County, State Route 1 along the San Mateo County coastline, and State Route 152 in southern Santa Clara County. A small number of state highways run through the heart of urban areas and are indistinguishable to most travelers from locally owned urban roadways. Such roads include El Camino Real from San Jose to San Francisco (State Route 82) and San Pablo Avenue (State Route 123) from Oakland to Hercules in the East Bay.

Toll Bridges

Seven state-owned toll bridges and the Golden Gate Bridge grace the San Francisco Bay. In 2004, over 133 million vehicles crossed the seven state-owned toll bridges in the Bay Area, generating approximately $313 million in total toll revenues. Since June 2000, motorists on the Golden Gate Bridge have been able to use the FasTrak™ electronic toll collection system to pay tolls. Motorists on the state-owned bridges have been able to use FasTrak™ since December 2000. In 2004, new FasTrak™-only lanes opened on the San Mateo-Hayward and Dumbarton bridges.

The Local Roadway Network

Bay Area cities and counties own and maintain more than 19,000 centerline miles of local roadways, which must balance the needs of bicyclists and pedestrians as well as those traveling by buses and private automobiles. About half of the more than 7,000 traffic signals on the region's local roadway system are synchronized to reduce the amount of time people spend waiting at red lights during weekday peak travel periods. The timing for about one-fifth of those signals has been recently updated for current traffic volumes, resulting in an average 13 percent reduction in travel time for the nearly 70 corridors that were retimed. In some major bus corridors, signals are programmed to give preferential treatment to buses that are running late so they can get back on schedule.

The Public Transit System

In fiscal year 2003-04, some two dozen Bay Area transit operators provided 188 million vehicle miles of service and carried more than 475 million passengers. Buses provide just under half of all service miles and carry nearly two-thirds of all passengers. BART, commuter rail, light rail, ferries, and door-to-door vans and taxis that serve elderly and disabled riders (called paratransit service) carry the remaining third. A total of 21 major intermodal terminals are the focus of a regional Transit Connectivity Study intended to improve the ease and efficiency of transferring between transit systems.

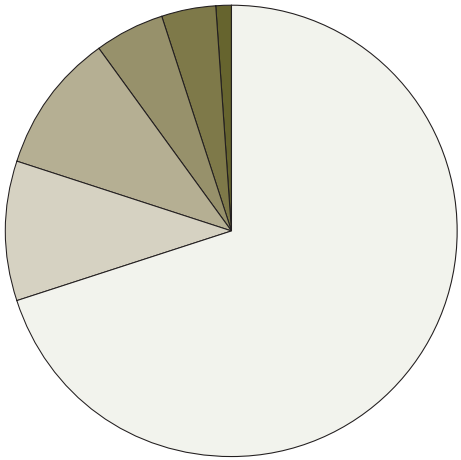
The region's operators have long been recognized nationally as leaders in making the transit system accessible to persons with disabilities. Today, more than 90 percent of the region's buses and 95 percent of transit centers and rail stations are accessible to persons using wheelchairs.

Pedestrian and Bicycle Facilities

The ability to get around safely on foot or by bicycle is increasingly recognized as an essential factor in a neighborhood's quality of life. Also, there is a growing recognition that walking and cycling can help to promote healthier lifestyles and combat health conditions associated with decreasing levels of physical activity, such as obesity and diabetes.

The network used by bicyclists and pedestrians is ubiquitous. It includes the entire local roadway system, as well as sidewalks and some dedicated pathways. In addition, most buses and trains now accommodate bicycles. Bicycles and pedestrians are excluded from most freeways for safety purposes, but access is provided on Bay Area toll bridges, either through bicycle lanes, special vans or transit service connections. Still, there are numerous locations without sidewalks or bicycle lanes; in such cases,

How Bay Area Workers Commuted, 2004



Drove Alone	**70%**
Carpooled	**10%**
Public Transportation	**10%**
Worked at Home	**5%**
Walked or Bicycled	**4%**
Other Means*	**1%**

Source: 2004 American Community Survey (U.S. Census Bureau)

*"Other Means" includes motorcycle and taxi.

bicyclists and pedestrians must share a lane with traffic. The safety of pedestrians and cyclists is a topic of increasing concern, and programs such as Safe Routes to School and other safety initiatives are being deployed by jurisdictions around the region.

The *2001 Regional Transportation Plan* proposed a 1,900-mile network of regionally significant bicycle facilities; the plan also identified gaps in city- and county-level bicycle plans and recommended specific improvements to fill these gaps. Approximately 35 percent of the regional network exists today. Regionwide, bicycling accounts for 1 percent of all trips, and walking accounts for about 9 percent. However, for trips to school, bicycling accounts for about 4 percent of trips and walking for more than 20 percent.

Airports and Seaports

The region's airports and seaports are gateways to the rest of the country and the world for tourism, business travel and trade. Most residents are familiar with the major international airports in San Francisco, Oakland and San Jose. Less well known are the region's major seaports and their cargo specialties: Oakland (container cargo); San Francisco and Redwood City (construction materials); and Richmond (gasoline and oil). Handling over 57 million passengers and 2 million containers a year, the Bay Area's airports and seaports also generate considerable ground traffic in surrounding areas.

Mobility: Getting Around the Bay Area

Mobility can be defined as the ease of getting around. This section includes statistics describing how easy (or difficult) it was to get around the Bay Area on freeways, local roadways and transit, as well as statistics on the number of vehicles and people that used each of these systems in 2004.

Schedule adherence (on-time performance) is used to describe ease of travel on transit. To track transit usage, the report includes annual ridership statistics reported by transit operators to the Federal Transit Administration.

Congestion levels during the morning and evening commutes provide a key measure of mobility on Bay Area freeways. The report also presents separate statistics on travel time savings offered by carpool lanes and the number of vehicles using carpool lanes.

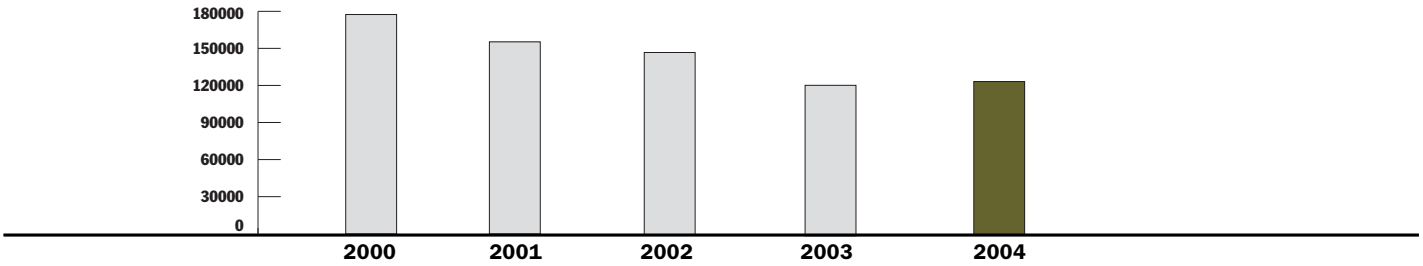
Measuring the ease of travel on the local road network is more challenging because the network is so extensive and is managed by more than 100 different cities and nine counties. Most jurisdictions use an indicator of congestion called "level of service," which corresponds roughly with traffic congestion. This report does not include traffic volumes on local roadways because this information is not consistently monitored or reported. We hope to fill this gap in future reports.

Rebounding Economy Prompts Rise in Freeway Congestion; 2 Percent Increase Ends Three-Year Decline

- Traffic congestion on Bay Area freeways increased in 2004 for the first time since 2000. The daily number of vehicle hours of delay due to congestion in the nine-county region rose by 2 percent in 2004, after dropping 18 percent in 2003, 5 percent in 2002 and 12 percent in 2001.
- The increase in congestion likely reflects the increased level of economic activity in the Bay Area in 2004. This same correlation between the economy and congestion may be borne out by the 2005 congestion statistics, which are expected to be available early in 2006.

Daily Freeway Delay by Bay Area County, 2000–2004

		Daily (Weekday) Vehicle Hours of Delay					Percent Change	
	Freeway Miles (2004)	2000	2001	2002	2003	2004	2003–2004	2000–2004
Alameda	138	61,700	65,600	61,300	46,300	50,540	+9%	–18%
Santa Clara	137	51,700	37,000	31,600	24,300	22,910	–6%	–56%
Contra Costa	87	16,200	18,800	19,400	18,700	18,520	–1%	+14%
San Francisco	19	12,500	8,500	11,400	11,200	8,860	–21%	–29%
San Mateo	73	18,100	10,900	7,700	7,300	7,800	+7%	–57%
Marin	28	9,900	7,900	8,400	6,200	7,410	+20%	–25%
Sonoma	55	4,300	4,400	4,400	5,200	5,320	+2%	+24%
Solano	79	3,200	2,400	3,700	2,600	2,830	+9%	–12%
Napa	5	0	0	0	0	0	n/a	n/a
Bay Area	**621**	**177,600**	**155,500**	**147,900**	**121,800**	**124,190**	**+2%**	**–30%**



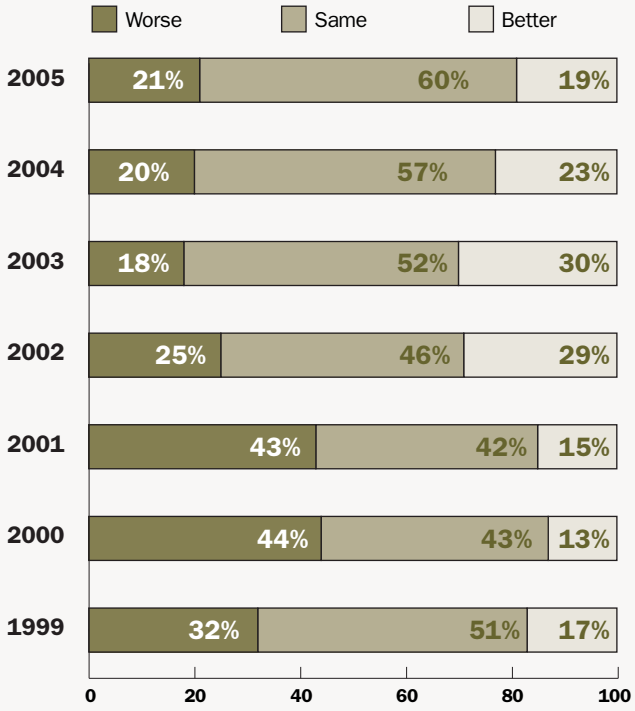
Source: Metropolitan Transportation Commission, Caltrans District 4

- Regionwide, vehicles typically spent 124,190 hours per weekday in congested conditions (defined as average speeds below 35 miles per hour for 15 minutes or longer) on Bay Area freeways in 2004. While this marks a 2 percent increase over 2003 figures, it is far below the 177,600 hours per day recorded in 2000 at the height of the region's technology-charged economic boom.
- The biggest overall increase in freeway congestion occurred in Alameda County, where daily vehicle hours of delay grew by over 4,000 to 50,540. The biggest percentage increase came in Marin County, where daily vehicle hours of delay rose to 7,410 in 2004 from 6,200 the year before — a 20 percent surge. Smaller percentage increases were registered in Alameda, San Mateo, Solano and Sonoma counties.
- Congestion declined by 21 percent on San Francisco freeways, and smaller dips were recorded in Contra Costa and Santa Clara counties.

Top 10 Bay Area Congestion Hot Spots

- The morning approach to the Bay Bridge on Interstate 80 remained the region's most notorious congestion location in 2004 — with daily vehicle hours of delay up a whopping 53 percent from 6,570 hours in 2003 (see page 10). Three of the Bay Area's 10 worst congestion locations now involve the Bay Bridge, including the morning approach along westbound Interstate 80 (a segment that also carries traffic bound for eastbound Interstate 580 and southbound Interstate 880), the eastbound afternoon commute across the span (number 10) and the afternoon approach on eastbound Interstate 80 and northbound U.S. 101 in San Francisco (number 4).
- Interstate 580 in Alameda County is another corridor with multiple high-congestion segments. The morning drive westbound from North Flynn Road at the top of the Altamont Pass to Airway Boulevard in Livermore ranked second on the Bay Area congestion list for 2004, and the afternoon eastbound drive from Hopyard Road in

Commuter Perceptions: Percent of Commuters Who Say Their Commute Is Better or Worse Than Last Year



Source: MTC Regional Rideshare Program

Freeway Congestion (continued)

Pleasanton to El Charro Road came in at number 3. These routes tied for the third spot on the 2003 list.

- One commute returned to the top 10 list after a lengthy absence. The afternoon commute along eastbound State Route 92 from Clawiter Road to Interstate 880 in Hayward climbed to number 6 on the list from number 15 in 2003, marking this segment's first appearance on the top 10 list since the height of the high-tech boom in 2000.
- Newcomers to the list for 2004 include the afternoon drive from Mill Valley to San Rafael on U.S. 101 (number 8), the morning drive along northbound U.S. 101 in San Jose from Interstate 280 to Trimble Road (number 9) and the afternoon Bay Bridge commute on eastbound Interstate 80 from west of the Yerba Buena Island tunnel out past the Powell Street exit in Emeryville (number 10).

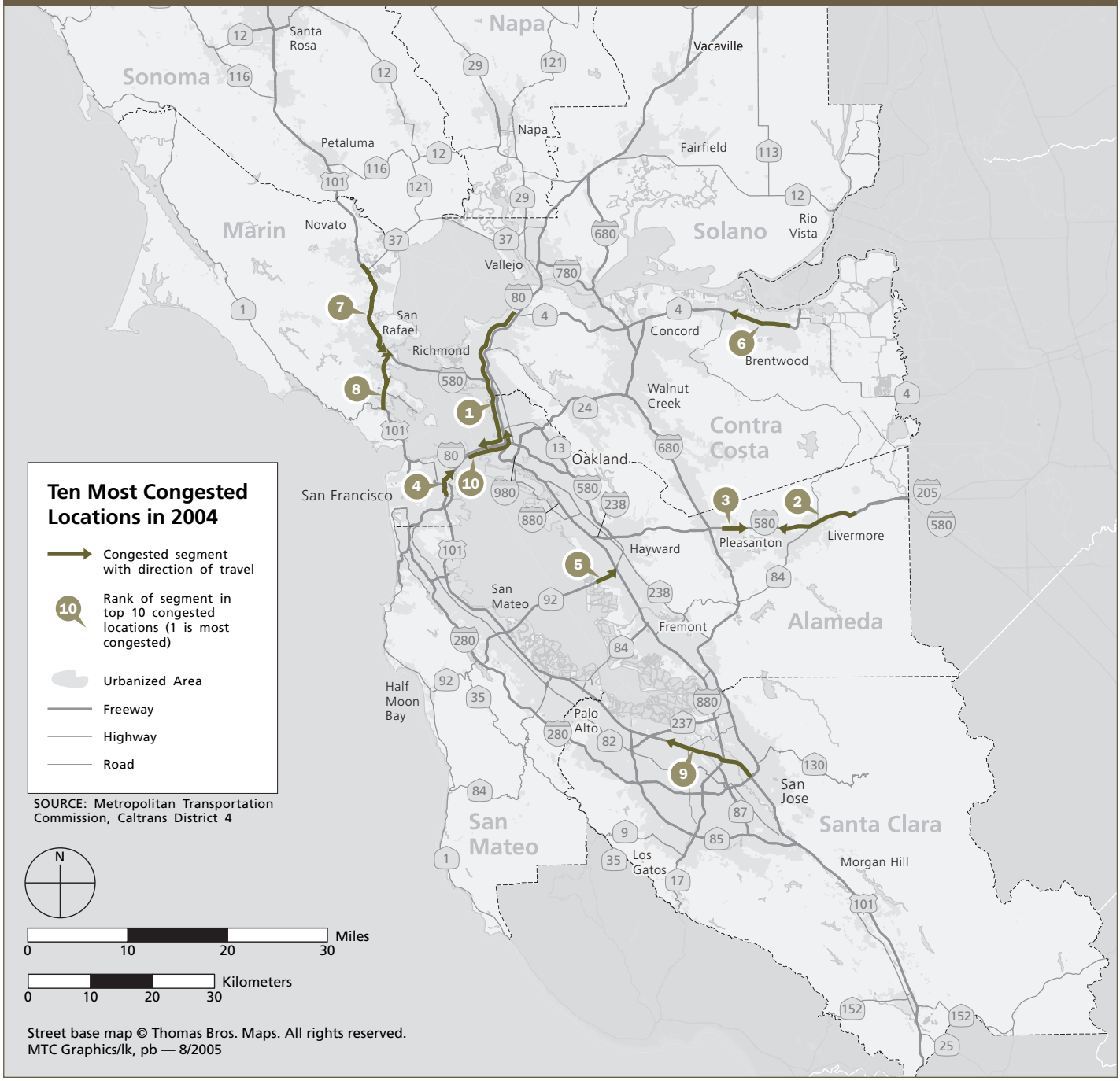
Bay Area Freeway Locations With Most Delay During Commute Hours, 2004

2004 Rank	Location	2004 Daily (Weekday) Vehicle Hours of Delay	2003 Rank	2002 Rank	2001 Rank	2000 Rank
1	**Interstate 80, westbound, a.m. —** Alameda/Contra Costa County *State Route 4 to Bay Bridge metering lights*	10,080	1	1	1	1
2	**Interstate 580, westbound, a.m. —** Alameda County *North Flynn Road to Airway Boulevard*	5,120	3	5	12	14
3	**Interstate 580, eastbound, p.m. —** Alameda County *Hopyard Road to west of El Charro Road*	4,320	3	3	5	13
4	**U.S. 101, northbound and Interstate 80, eastbound, p.m. —** San Francisco *Cesar Chavez Street to west end of Bay Bridge*	3,840	2	4	4	5
5	**Route 92, eastbound, p.m. —** Alameda County *Clawiter Road to I-880 interchange*	3,760	15	35	11	8
6	**Route 4, westbound, a.m. —** Contra Costa County *Lone Tree Way to west of Loveridge Road*	3,600	5	7	15	32
7	**U.S. 101, southbound, a.m. —** Marin County *North of Route 37 to Interstate 580*	3,110	6	9	8	6
8	**U.S. 101, northbound, p.m. —** Marin County *Route 1 to north of Interstate 580*	2,680	20	16	22	22
9	**U.S. 101, northbound, a.m.. —** Santa Clara County *Interstate 280 to north of Trimble Road*	2,560	14	14	42	19
10	**Interstate 80, eastbound, p.m. —** San Francisco and Alameda counties *West of Treasure Island to east of Powell Street*	2,430	18	38	34	41

Sources: Metropolitan Transportation Commission, Caltrans District 4

Rankings are for routes in which continuous stop-and-go conditions occur with few, if any, breaks in the queue. Thus, corridors that have equally severe delays, but where congestion is broken into several segments, may rank lower in this type of congestion listing.

Gridlock's Top 10, 2004



Bridge Crossings Slip Slightly, But Traffic Trends Up on Some Freeways

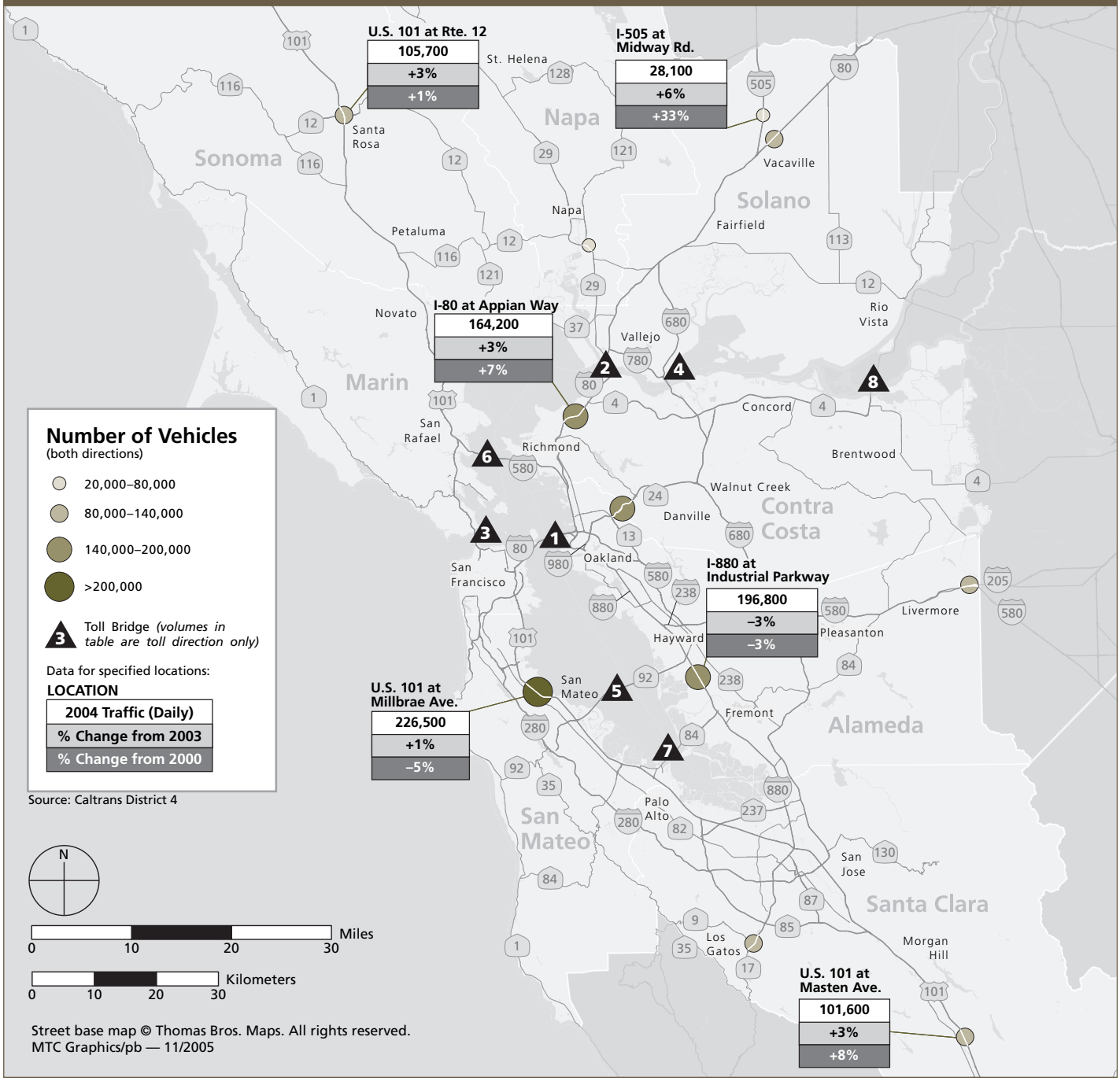
- The volume of traffic on Bay Area toll bridges was virtually flat in 2004, registering a slight decline of less than 1 percent from the 2003 tally. Traffic on each of the individual bridges ran very close to year-ago levels.
- Traffic to San Francisco over both the Bay Bridge and Golden Gate Bridge varied by less than 1 percent over 2003 levels; however 2004 traffic volumes on these bridges remained 4 percent and 8 percent lower than in 2000, reflecting overall economic trends. The 1 percent growth in traffic on the Golden Gate Bridge reverses the declining trend observed since 2000.
- Traffic on the Richmond-San Rafael Bridge declined 3 percent, which may reflect construction impacts due to the seismic retrofit project (recently completed in 2005).
- Traffic on the Antioch Bridge increased 3 percent between 2003 and 2004 and 26 percent from 2000 to 2004. The increased traffic reflects the continued growth at the outer edge of the region and in adjacent counties. Still, the increase is small in absolute terms, since traffic volume on the Antioch Bridge is the lightest in the region.
- The volume of vehicles on selected freeway segments inched up in 2004, paralleling the regional uptick in commute-hour congestion. At sampled locations in Contra Costa, San Mateo, Santa Clara, Solano and Sonoma counties, traffic counts rose from a low of 1 percent to a high of 6 percent.
- An exception to this trend was recorded on Interstate 880 in Hayward (Alameda County), where the volume of vehicles declined 3 percent from 2003 figures.
- In the upper North Bay location of Midway Road on Interstate 505, the volume of traffic has grown by a third since 2000.

Average Daily Traffic on Bay Area Toll Bridges (toll direction only), 2000–2004

	Number of Vehicles					Percent Change	
Bridge	**2000**	**2001**	**2002**	**2003**	**2004**	**2003–2004**	**2000–2004**
1 San Francisco–Oakland Bay	138,200	136,600	137,000	134,700	133,000	–1%	–4%
2 Carquinez	60,400	62,200	64,100	64,000	64,000	0%	+6%
3 Golden Gate	58,100	56,500	54,900	52,700	53,400	+1%	–8%
4 Benicia–Martinez	47,700	49,400	50,800	51,000	50,600	–1%	+6%
5 San Mateo–Hayward	42,600	41,200	42,000	44,700	45,700	+2%	+7%
6 Richmond–San Rafael	34,000	35,400	35,900	35,800	34,800	–3%	+2%
7 Dumbarton	34,200	34,400	33,000	30,500	30,100	–1%	–12%
8 Antioch	5,800	6,500	6,900	7,100	7,300	+3%	+26%
Total All Bridges	**421,000**	**422,200**	**424,600**	**420,500**	**418,900**	**–0.4%**	**–0.5%**

Sources: Bay Area Toll Authority; Golden Gate Bridge, Highway and Transportation District

Average Daily Traffic on Bay Area Highways, 2004 (Selected Locations)



Carpool Lanes Yield Time Savings in Key East Bay, South Bay Corridors

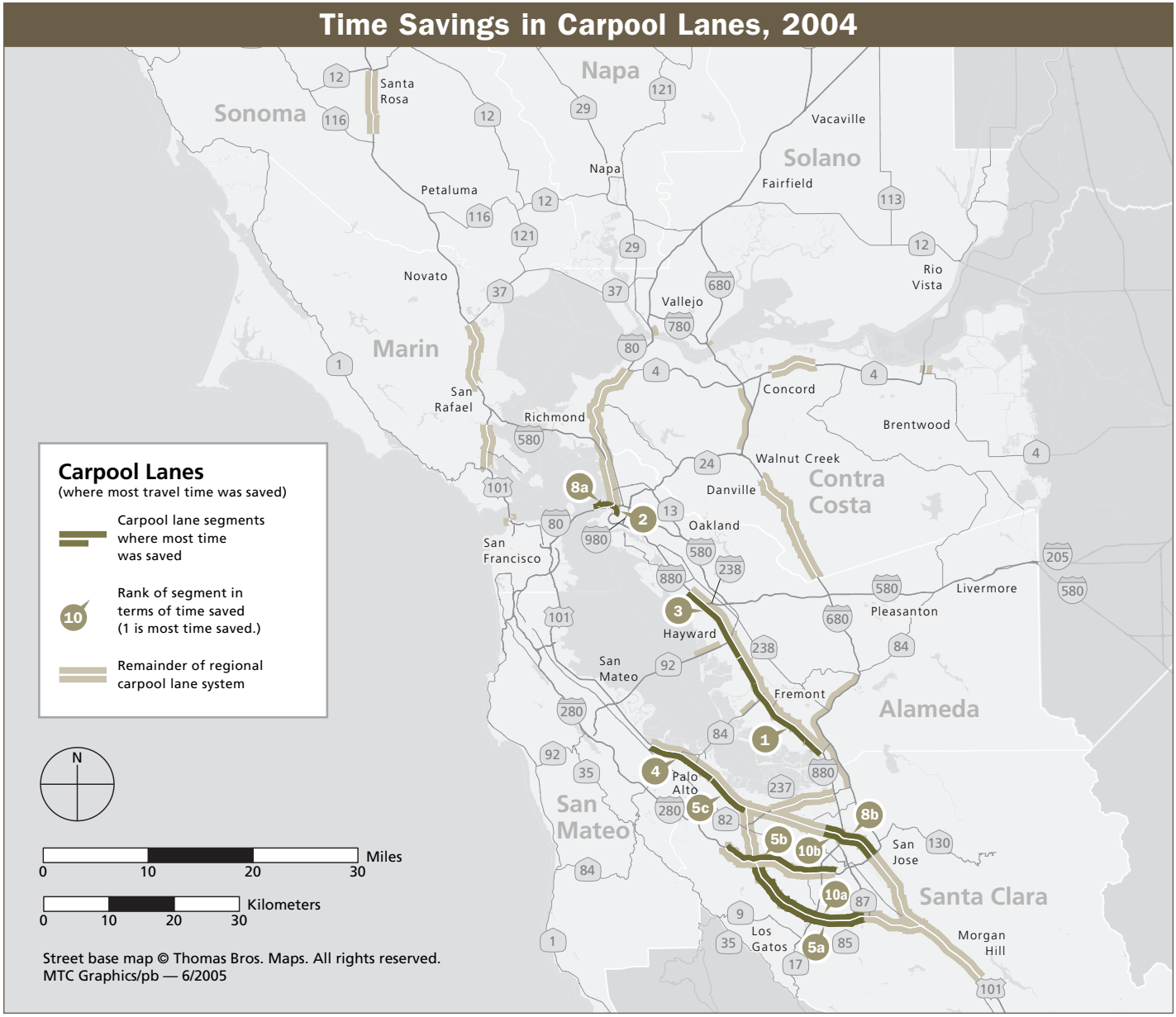
- Peak-hour carpoolers continued to realize significant travel time savings compared to other drivers along several stretches of the region's network of high-occupancy-vehicle lanes.
- On a per mile basis, the carpool lanes leading to the Bay Bridge toll plaza offer the largest savings: an 18-minute time advantage for carpoolers on the 1.2 mile segment on Interstate 880 from 16th Street in Oakland to the toll plaza, and a 13-minute advantage for carpoolers on the four carpool lane approaches from Interstate 80, ranging from 0.4 mile to 1 mile in length.
- Longer stretches on southbound I-880 in Alameda County offer some of the largest time savings to carpoolers: together the two segments between Marina Boulevard and

Bay Area Carpool Lanes Where Most Time Was Saved, 2000–2004

		Minutes Saved per Vehicle in Peak Hour					Change in Minutes Saved	
Rank	Carpool Lane	2000	2001	2002	2003	2004	2003–2004	2000–2004
1	**Interstate 880, southbound, a.m.** — Alameda County *Whipple Road to Mission Boulevard (11.5 miles)*	25	40	40	20	19	–1	–6
2	**Interstate 880, northbound, a.m.** — Alameda County *16th Street to Bay Bridge toll plaza (1.2 miles)*	32	31	23	5	18	+13	–14
3	**Interstate 880, southbound, a.m.** — Alameda County *Marina Boulevard to Whipple Road (8.8 miles)*	14	12	12	18	17	–1	+3
4	**U.S. 101, southbound, a.m.** — San Mateo County *Whipple Avenue to Santa Clara County line (6.9 miles)*	8	9	8	13	15	+2	+7
5a	**Route 85, southbound, p.m.** — Santa Clara County *Interstate 280 to Almaden Expressway (11.8. miles)*	9	15	11	12	14	+2	+5
5b	**Interstate 280, northbound, a.m.** — Santa Clara County *Leland Avenue to Magdalena Avenue (10.7 miles)*	9	8	6	6	14	+8	+5
5c	**U.S. 101, southbound, p.m.** — Santa Clara County *San Mateo County line to Ellis Street (5.5 miles)*	9	9	9	13	14	+1	+5
8a	**Interstate 80, westbound, a.m.**[1] — Alameda County *Bay Bridge toll plaza (4 lanes, 0.4 to 1.0 miles)*	24	24	19	13	13	0	–11
8b	**U.S. 101, northbound, a.m.** — Santa Clara County *I-280/I-680 interchange to Guadalupe Parkway (6 miles)*	16	13	13	13	13	0	–3
10a	**Route 85, northbound, a.m.** — Santa Clara County *Almaden Expressway to Interstate 280 (11.8 miles)*	9	16	9	13	12	–1	+3
10b	**U.S. 101, southbound, p.m.** — Santa Clara County *Guadalupe Parkway to I-280/I-680 interchange (5.0 miles)*	5	12	12	12	12	0	+7

Source: Caltrans District 4

[1]Carpool is three or more persons per vehicle. For all other listed locations, carpool is two or more persons.



Whipple Avenue (ranked 3rd at 17 minutes) and Whipple Avenue and Mission Boulevard (ranked 1st at 19 minutes) offer a 36-minute time advantage to carpoolers traveling the entire 19-mile distance.

- The seven other carpool lanes in the top 10 for travel time savings are on South Bay freeways with well-established carpool lanes (U.S. 101, Interstate 280 and Route 85).

Carpool Lane Popularity Lags, Despite Rise in Congestion in 2004

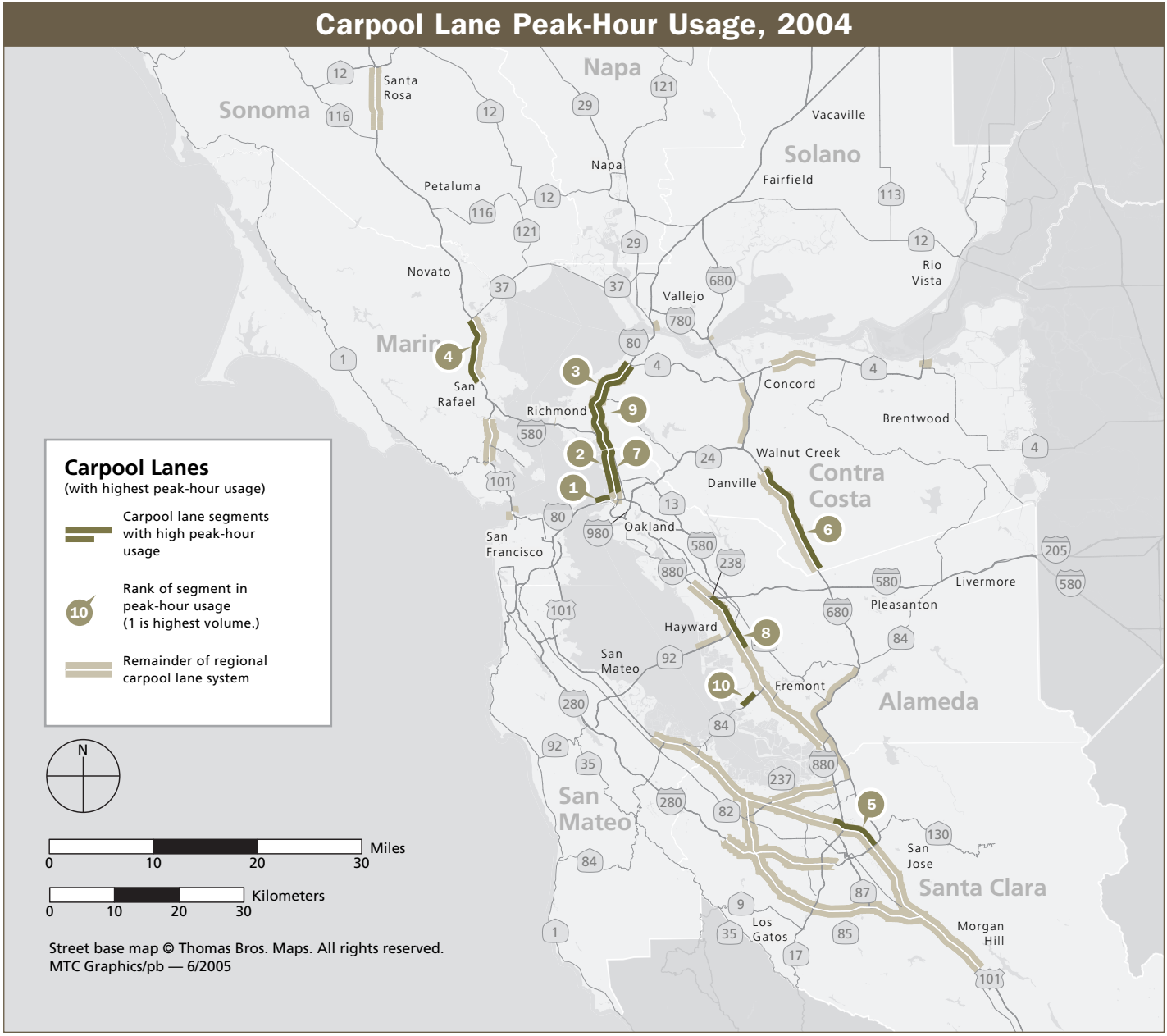
- Carpool lanes on Interstate 80 in Alameda and Contra Costa counties are the region's most heavily used segments. Westbound carpool lanes occupy three of the top 10 slots — not surprising given that the westbound morning commute from State Route 4 to the Bay Bridge has consistently ranked as the region's most congested commute. Two eastbound Interstate 80 carpool lane segments are also among the most heavily used, occupying the number seven and number nine slots.
- In seven of the 10 most heavily used carpool lane segments in 2004, peak-hour vehicle counts were down from the year-earlier period. The explanation for this decrease in carpool lane popularity is not clear, since congestion increased on many freeways in 2004, relative to 2003 levels.
- Over the five-year period from 2000 to 2004, the number of peak-hour, carpool-lane vehicles declined in six of the 10 segments listed. This is consistent with the overall

Bay Area Carpool Lanes With Highest Peak-Hour Usage, 2000–2004

		Peak-Hour Carpool Vehicles[1]					Percent Change	
Rank	Carpool Lane	2000	2001	2002	2003	2004	2003–2004	2000–2004
1	**Interstate 80, westbound, a.m. —** Alameda County *Bay Bridge toll plaza*	3,804	3,975	3,730	3,512	3,628	+3%	–5%
2	**Interstate 80, westbound, a.m. —** Alameda County *Contra Costa County line to Powell Street*	1,113	1,555	1,698	1,512	1,481	–2%	+33%
3	**Interstate 80, westbound, a.m. —** Contra Costa County *Route 4 to Alameda County line*	1,428	1,317	1,285	1,514	1,334	–12%	–7%
4	**U.S. 101, southbound, a.m. —** Marin County *Route 37 to North San Pedro Road*	1,282	1,361	1,361	1,317	1,306	–1%	+2%
5	**U.S. 101, northbound, a.m. —** Santa Clara County I-280/I-680 interchange to Guadalupe Parkway	1,585	1,594	1,490	1,554	1,304	–16%	–18%
6	**Interstate 680, northbound, p.m. —** Contra Costa County *Alcosta Boulevard to Livorna Road*	1,421	1,383	1,374	1,266	1,249	–1%	–12%
7	**Interstate 80, eastbound, p.m. —** Alameda County *Port of Oakland overcrossing to Contra Costa County line*	1,217	1,080	1,070	1,295	1,224	–5%	+1%
8	**Interstate 880, northbound, p.m. —** Alameda County *Whipple Road to south of Interstate 238 interchange*	1,364	1,338	1,264	1,254	1,190	–5%	–13%
9	**Interstate 80, eastbound, p.m. —** Contra Costa County *Alameda County line to Route 4*	1,091	1,332	1,059	1,118	1,189	+6%	+9%
10	**Route 84, westbound, a.m. —** Alameda County *Newark Boulevard to Dumbarton Bridge toll plaza*	1,376	1,354	1,229	1,043	1,181	+13%	–14%

Source: Caltrans District 4

[1]Includes buses, vanpools and motorcycles

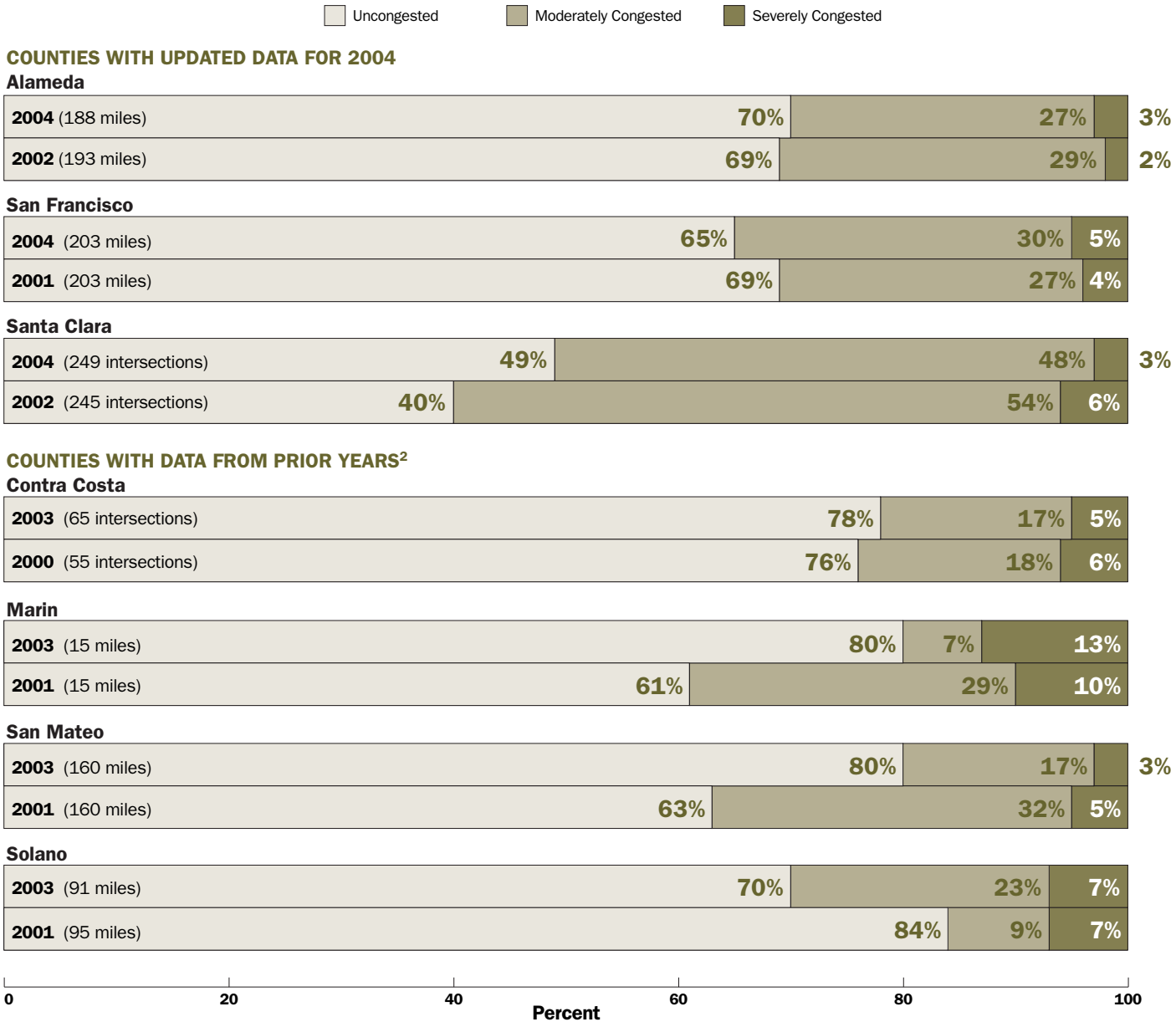


downward trend in congestion during this period. The carpool lanes that stand out as exceptions are on Interstate 80 between Powell Street and the Contra Costa County line. Here, westbound morning carpool volumes increased by 33 percent and eastbound evening carpool volumes increased by 9 percent. Again, this may reflect the unique levels of congestion in the I-80 corridor.

Local Road Congestion Eases in Santa Clara County, Inches Up in San Francisco

- Alameda, San Francisco and Santa Clara counties gathered fresh local roadway congestion data in 2004, and the results paint a mixed picture of evening peak-period traffic conditions in the region's three most heavily urbanized counties.
- Santa Clara County saw the biggest changes in traffic conditions, with a 9 percentage point increase in uncongested intersections and a halving of the level of severe congestion — down from 6 percent in 2002 to 3 percent in 2004. Moderately congested roads declined to 48 percent, from 54 percent. Still, Santa Clara remains the only Bay Area county with a majority (51 percent) of its local roadways classified as either moderately or severely congested.
- San Francisco's traffic worsened slightly, with a 4 percentage point decrease in uncongested roads and a combined 4 percentage point increase in moderate and severe congestion.
- Alameda County experienced only minor variations in traffic conditions between 2002 and 2004.
- Four counties — Contra Costa, Marin, San Mateo and Solano — did not report new roadway congestion figures for 2004. These counties typically collect data in odd-numbered years. In Contra Costa, previously unreleased data for 2003 show a slight improvement in traffic conditions compared to 2000 levels. The proportion of uncongested roads improved by 2 percentage points, with 1 percentage point decreases in the moderate and severely congested categories.

Local Roadway Congestion by County[1] During the P.M. Peak Commute Period



Source: County congestion monitoring reports

[1] Selected road segments and/or intersections; Napa and Sonoma counties do not monitor local roadway congestion.
[2] Current (2004) data is not available for Contra Costa, Marin, San Mateo and Solano counties.

Punctuality Declines for Several Bus Operators; Rail Lines Continue to Post Strong On-Time Results

- On-time performance declined for several of the region's large operators. One likely explanation is that budget constraints forced cuts in staffing, supervisors and service levels.
- AC Transit's on-time performance plummeted from 81 percent in 2002-03 to 56 percent in 2003-04, reversing a two-year trend of improving performance.
- In contrast, VTA (both rail and buses), BART and SamTrans posted small improvements in on-time performance.
- BART, Caltrain and VTA continued to operate rail services with on-time records better than 90 percent.

On-Time Performance of Seven Largest Bay Area Transit Operators, Fiscal Years 1999-2000 – 2003-04

	Percent of Trips on Time by Fiscal Year					
	1999-2000	2000-01	2001-02	2002-03	2003-04	2003-04 Goal
Buses						
Valley Transportation Authority (VTA)[1]	94%	93%	95%	95%	97%	95%
SamTrans[2]	85%	85%	84%	84%	88%	85%
Golden Gate Transit[3]	87%	85%	87%	85%	82%	90%
Muni (electric trolley bus)[4]	NA	64%	74%	74%	72%	85%
Muni (motor bus)[4]	NA	63%	68%	70%	69%	85%
AC Transit[5]	73%	69%	74%	81%	56%	90%
Rail						
VTA[6]	91%	93%	84%	90%	96%	95%
BART[7]	92%	92%	93%	92%	93%	95%
Caltrain[8]	66%	86%	96%	95%	92%	95%
Muni[4]	NA	49%	66%	67%	66%	85%

Sources: AC Transit, Golden Gate Transit, Muni, SamTrans, VTA, Caltrain, BART

Notes:

[1] No more than 5 minutes late
[2] No more than 5 minutes late; prior to 2001-02, no more than 5 minutes late or 1 minute early
[3] Less than 5 minutes late and 1 minute early (bus only); prior to 2001-02, no more than 5 minutes late.
[4] No more than 4 minutes late or 1 minute early
[5] Never early and no more than 5 minutes late
[6] No more than 3 minutes late
[7] Less than 5 minutes late at scheduled terminal stations
[8] Train arrived at the end of the station within 5 minutes of scheduled time

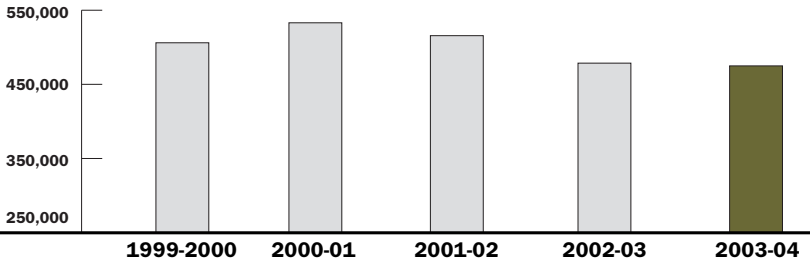
Peter Beeler

Transit Ridership Falls to Seven-Year Low in 2003-04, But Largest Operators Buck Downward Trend

- Transit ridership declined for the third year in a row in 2003-04, decreasing by 1 percent to 475 million — the lowest level of ridership since 1997-98. But following declines of 7 percent in 2002-03 and 3 percent in 2001-02, the rate of decline appears to have slowed for the first time since ridership peaked in 2000-01, the height of the region's economic expansion. (Also, partial-year results reported by some transit operators in 2005 indicate a reversal of the ridership slide.)
- In contrast with prior years, ridership on the three largest operators (Muni, BART and AC Transit) held steady or increased slightly from the prior year.
- Midsized operators such as VTA and SamTrans experienced ridership losses in the double digits. Such

Ridership on Bay Area Transit Systems by Operator, Fiscal Years 1999-2000 – 2003-04

	Thousands of Annual Boardings					Percent Change	
Operator	**1999-2000**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2002-03–2003-04**	**1999-2000–2003-04**
Muni	226,182	236,205	234,303	216,947	217,049	0%	–4%
BART	97,024	103,919	97,351	93,799	98,026	+5%	+1%
AC Transit	68,088	71,529	69,531	62,755	64,906	+3%	–5%
Valley Transportation Authority	55,701	58,160	53,710	46,864	39,776	–15%	–29%
SamTrans	17,925	18,136	17,387	16,859	15,064	–11%	–16%
Golden Gate Transit	11,465	11,618	10,676	10,261	9,789	–5%	–15%
Caltrain	8,735	9,925	8,138	7,870	8,015	+2%	–8%
Other Operators	20,986	23,546	24,460	23,232	22,391	–4%	+7%
Total – All Operators	**506,106**	**533,038**	**515,556**	**478,587**	**475,016**	**–1%**	**–6%**



Sources: Metropolitan Transportation Commission and transit operators

Data for FY 2003-04 is provisional.

decreases in ridership likely resulted from service cuts (11 percent cut in revenue-miles of service by VTA and 7 percent by SamTrans) in 2003-04 due to budget constraints. Along with Golden Gate Transit, these operators experienced the largest cumulative decrease in ridership over the five-year period from 1999-2000 to 2003-04.

A Closer Look at Top 10 Ridership Bus Routes, by Boardings

- There is a large degree of year-to-year consistency in the list of the most heavily used Bay Area bus routes.
- Significantly, the number one and two routes carry more than twice as many passengers on an average weekday as the number nine and 10 routes.
- In 2003-04, eight of the top 10 bus routes were operated by San Francisco Muni, which also boasts the largest ridership among all Bay Area transit operators.

Top 10 Bay Area Bus Routes, by Boardings

Rank	Route	Average Weekday Boardings 2003-04	2002-03 Rank
1.	SF Muni: 38 Geary	49,300	1
2.	SF Muni: 14 Mission	47,200	2
3.	SF Muni: 9 San Bruno	32,100	4
4.	SF Muni: 30 Stockton	30,800	6
5.	SF Muni: 49 Van Ness/Mission	28,900	3
6.	SF Muni: 1 California	27,800	5
7.	SF Muni: 15 Third St.	25,300	6
8.	Valley Transportation Authority: 22 Eastridge – Palo Alto/Meno Park	20,500	8
9.	AC Transit: 82 International/East 14th	20,100	NA
10.	SF Muni: 22 Fillmore	19,600	9

Sources: Muni, VTA, AC Transit

Safety

One of the goals of MTC's long-range *Transportation 2030 Plan* is to improve safety for all users of the transportation system — drivers and passengers, transit users, bicyclists and pedestrians.

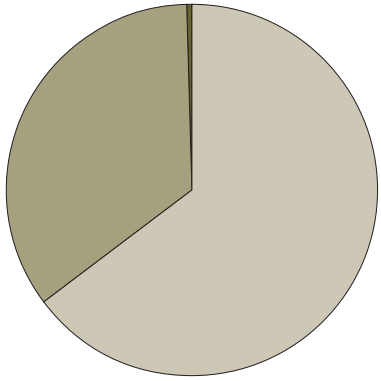
This report uses statistics on injury and fatal collisions to gauge roadway safety. The most widely used safety information on motor vehicle (automobile, truck or motorcycle) collisions with automobiles, bicyclists and pedestrians comes from data assembled by the California Highway Patrol.

In 2002, the Federal Transit Administration shifted to a new reporting system that requires transit operators to submit more frequent and more comprehensive reports on transit safety. While the new requirements promise ultimately to improve the quality of information, the safety statistics collected by FTA during the transition period appear to be incomplete. We have therefore decided not to include data on transit-related injuries and fatalities in the *State of the System 2005* report.

Number of Injury and Fatal Collisions Drops for Fourth Straight Year

- The number of reported injury and fatal motor vehicle collisions in the Bay Area fell 5 percent in 2004, to just under 34,000. This follows a 5 percent decrease in 2003, and marks the fourth straight annual decline in the number of such incidents. The 2004 total is 15 percent lower than the recent high of 40,053 injury and fatal collisions in 2000, and is the lowest of any year in the past 10.
- After increasing each of the prior five years, the number of fatal collisions in 2004 decreased 9 percent to 426.
- Fortunately, most motor vehicle collisions do not result in injuries or fatalities. In 2004, 65 percent of collisions involved property damage only, which is in line with prior years. Approximately 35 percent of collisions resulted in injuries, and less than one-half of one percent caused fatalities.

Motor Vehicle Collisions in the Bay Area In 2004: Fatal, Injury, Property Damage

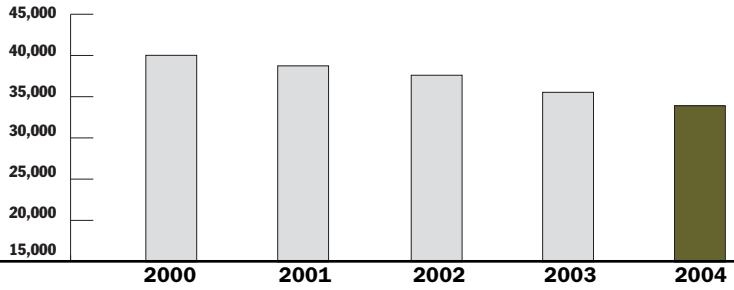


Fatal Collisions	**0.4%**
Injury Collisions	**34.9%**
Property Damage Only Collisions	**64.7%**

Source: California Highway Patrol
96,069 collisions = 100%

Injury and Fatal Collisions on Bay Area Roadways, 2000–2004

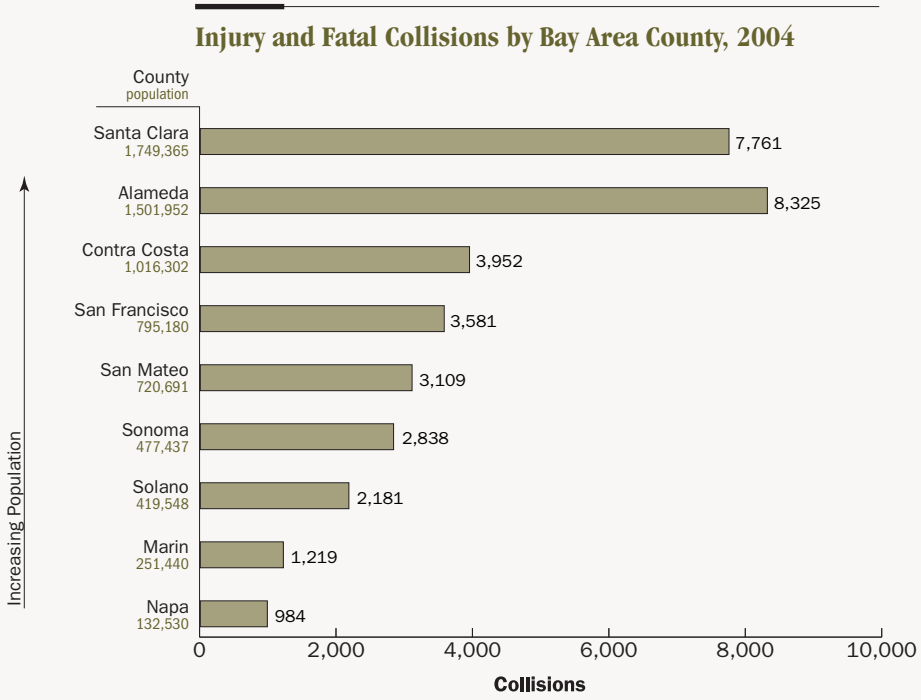
						Percent Change	
	2000	2001	2002	2003	2004	2003–2004	2000–2004
Injury Collisions	39,609	38,322	37,167	35,089	33,524	–4%	–15%
Fatal Collisions	444	449	451	468	426	–9%	–4%
Total Injury and Fatal Collisions	**40,053**	**38,771**	**37,618**	**35,557**	**33,950**	**–5%**	**–15%**



Source: California Highway Patrol

- The 96,069 reported collisions in 2004 represented a 5 percent drop compared to 2003, when 100,751 collisions were reported.
- Several key factors influence the number of collisions. These include: driver education and behavior, vehicle safety features, roadway conditions, traffic congestion and total number of miles driven. Studies suggest that while freeway driving accounts for approximately 60 percent of all miles driven in the Bay Area, only about 25 percent of all collisions occur on freeways.

A Closer Look – We can get a rough idea of the geographic distribution of injury and fatal collisions by breaking them out by county of occurrence. In general, a given county's share of collisions correlates closely with its size, as measured by population (see bar graph). The greatest number of collisions occur in Alameda County, though it ranks second to Santa Clara County in terms of population. This is probably explained by the fact that Alameda is a "crossroads" county, within whose borders a significant number of vehicle miles of travel are logged each year — both by its own residents and those from other counties.



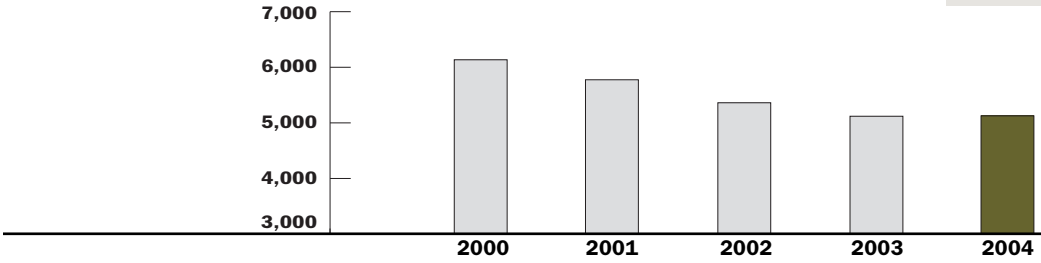
Sources: California Highway Patrol, California Department of Finance

Number of Collisions Involving Bicyclists or Pedestrians Holds Steady in 2004, Ending Multi-Year Downward Trend

- The number of injury and fatal motor vehicle collisions involving bicyclists or pedestrians held steady in 2004, with the data showing 5,125 such collisions compared to 5,112 in 2003. This represents a leveling off in a steady downward trend that has been in place since 1999. Indeed, since 2000, double-digit decreases have been recorded in nearly all categories of pedestrian- and bicyclist-involved collisions (see table below).
- An increase of 109 collisions resulting in injury or fatality to cyclists offset a decrease of 96 collisions resulting in injury or fatality to pedestrians. Fatal collisions are five times more likely to involve pedestrians than cyclists, reflecting the fact that walking is a more common form of transportation than bicycling.
- The 5,125 injury and fatal collisions involving pedestrians or cyclists represent 15 percent of the 33,950 injury and fatal motor vehicle collisions that occurred in 2004 (see previous section). However, the 120 fatal collisions involving pedestrians and cyclists represent a disproportionate 28 percent of all fatal motor vehicle collisions.
- These data include only motor vehicle collisions reported to law-enforcement authorities. There may be a significant number of injury collisions involving pedestrians and cyclists that are not reported.

Injury and Fatal Motor Vehicle Collisions Involving Pedestrians or Bicyclists, 2000–2004

	Collisions					Percent Change	
	2000	2001	2002	2003	2004	2003–2004	2000–2004
Collisions Involving Pedestrians							
Injury Collisions	3,173	3,080	2,910	2,740	2,648	–3%	–17%
Fatal Collisions	134	103	111	104	100	–4%	–25%
Subtotal	3,307	3,183	3,021	2,844	2,748	–3%	–17%
Collisions Involving Bicyclists							
Injury Collisions	2,810	2,566	2,321	2,254	2,357	+5%	–16%
Fatal Collisions	17	20	19	14	20	+43%	+18%
Subtotal	2,827	2,586	2,340	2,268	2,377	+5%	–16%
Total Involving Bicyclists or Pedestrians	**6,134**	**5,769**	**5,361**	**5,112**	**5,125**	**<1%**	**–16%**



Source: California Highway Patrol

A Closer Look – In the absence of better data about how much people are walking and bicycling in the Bay Area, we can look for patterns based on population by jurisdiction. As with data on all collisions, there appears to be a strong correlation between population rank and rank in pedestrian- and bicycle-involved motor vehicle collisions. (For this reason, there is a great deal of consistency from year to year in the jurisdictions with the highest number of pedestrian- and bicycle-involved collisions, with the largest cities — San Francisco, Oakland and San Jose — consistently reporting the highest number of collisions.) Some notable exceptions may be explained by factors such as travel patterns, demographics and daytime population (workers or students).

Berkeley, which is the 16th-largest Bay Area city in terms of population, ranks 4th in the number of pedestrian-involved collisions and 3rd in bicycle-involved collisions. This likely reflects the high level of walking and cycling in this university-centered community. Berkeley also has a higher daytime population due to the university, which attracts large numbers of students and workers. (Similar factors are at work in Palo Alto.)

The city of Vallejo ranks 12th in terms of population and 6th for collisions involving pedestrians. Compared to other Bay Area communities, Vallejo has a greater percentage of youths under 18 and a greater share of persons living in poverty. Both factors tend to correlate with a higher level of pedestrian activity.

Injury and Fatal Motor Vehicle Collisions Involving Pedestrians And Bicyclists by Bay Area Jurisdiction, 2004

PEDESTRIANS

2004 Rank	Jurisdiction	Total 2004	Annual Average 1999–2003	Rank in Population
1	San Francisco	730	901	2
2	San Jose	330	347	1
3	Oakland	290	298	3
4	Berkeley	105	113	16
5	Hayward	64	76	8
6	Vallejo	62	51	12
7	Santa Rosa	49	56	6
8	San Mateo	43	46	21
9	Fremont	41	63	4
10	Santa Clara	40	28	13

BICYCLISTS

2004 Rank	Jurisdiction	Total 2004	Annual Average 1999–2003	Rank in Population
1	San Francisco	323	357	2
2	San Jose	321	300	1
3	Berkeley	132	136	16
4	Oakland	118	166	3
5	Santa Rosa	63	74	6
6	Palo Alto	56	74	35
7	Concord	52	46	11
8	Sunnyvale	51	47	10
9	Fremont	48	61	4
10	Napa	47	37	24

Sources: California Highway Patrol, California Department of Finance

State of Repair

The state of repair of freeways, local roadways and transit affects travelers in two respects. The more obvious impact is on the quality of travel. The second impact, which is not directly reflected in the indicators in this report, relates to cost. When roadways and transit vehicles are allowed to fall into disrepair, it usually ends up costing more to repair them than it would have cost to perform routine maintenance — just as deferring maintenance on a house often results in a more expensive repair.

For freeways and local roadways, pavement condition is used as an indication of the state of repair. The condition of the transit system is measured by the average distance vehicles are driven between vehicle breakdowns that cause a disruption in service; the unscheduled repairs are known as service breakdowns.

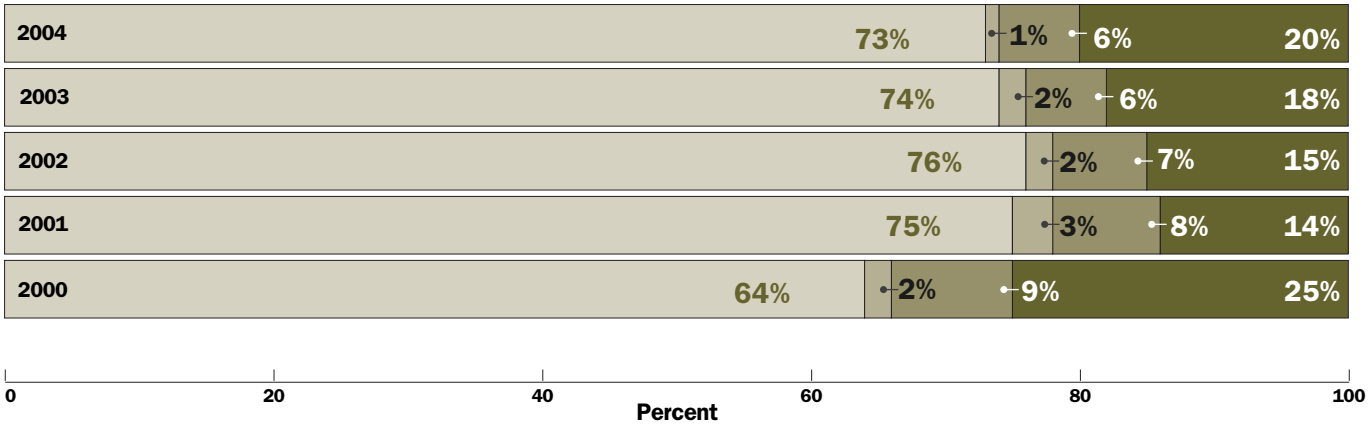
Slight Slippage in State Highway Pavement Conditions, But Five-Year Comparison Is Favorable

- The pavement condition on state highways in the Bay Area slipped slightly in 2004, as the share of roads with no distress dropped a notch to 73 percent (from 74 percent), and the share with major distresses increased to 20 percent (from 18 percent).
- While the data suggest that we are still well ahead of where we were in 2000, roadway conditions have slid since 2001, when 75 percent of roads were considered to have no distress and just 14 percent had major distresses.

Note:

State-owned roadways are commonly called state highways and include freeways, rural highways (such as Route 1 along the Pacific Coast, Route 29 in Napa and Route 116 in Sonoma) and state-owned urban and suburban arterials (such as San Pablo Avenue in Alameda and Contra Costa counties and Skyline Boulevard in San Mateo County). There are 1,370 miles of state-owned roads in the Bay Area.

Pavement Conditions for State Highways in the Bay Area, 2000–2004



No Distress

Poor Ride Quality Only
Pavements that exhibit moderate potholes and cracks, and can be treated with 1" to 2" thick overlays.

Minor Structural Distress
Pavements that exhibit poor condition with significant cracks. These pavements are candidates for rehabilitation.

Major Structural Distress
Pavements that exhibit poor condition with extensive cracks; often require reconstruction.

Source: Caltrans

Includes state-owned freeways and non-freeway roadways. Excludes state-owned bridges.

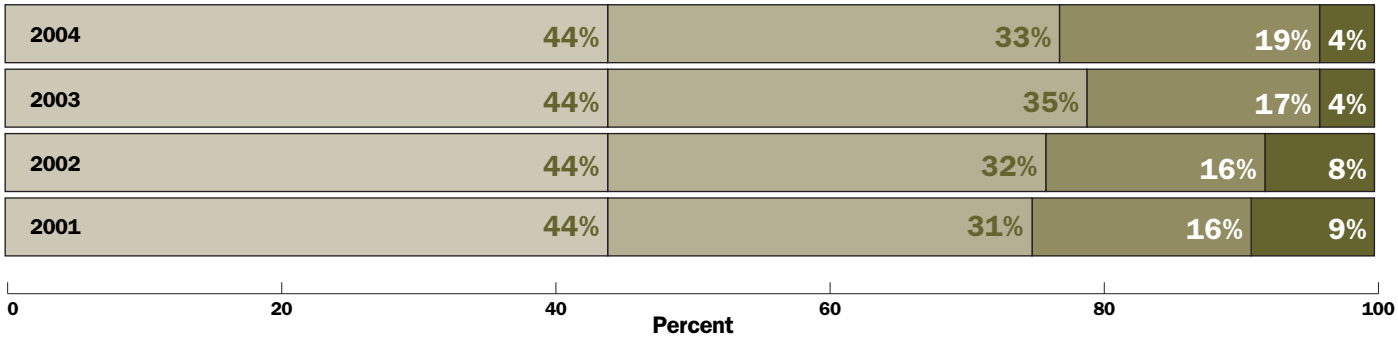
Total Bay Area lane miles in 2000 was 5,920. Total in 2001, 2002, and 2003 was 5,960. Total in 2004 was 5,980.

- In fiscal year 2000-01, the state boosted outlays to repair damaged roads and perform preventive maintenance. Since then, state investment in pavement maintenance has not kept pace with repair and preventive maintenance needs.
- Despite the recent signs of slippage, the state clearly has made progress in repairing the most severely damaged roadways. The share of roads with major structural distress was at 20 percent in 2004, matching last year's low and down from 25 percent in 2000.

Bay Area Roadways a Trifle Bumpier in 2004; Regional Index at Four-Year Low

- The ride got a wee bit rougher on the Bay Area's 19,000 miles of local streets and roads in 2004, as the average pavement condition index (PCI) dropped a point to 62 (out of a maximum possible 100 points). This continues a slow slide in the region's PCI rating, which has fallen four points in as many years. In 2001, the PCI average was 66; this fell to 65 in 2002, 63 in 2003, and then to this year's low of 62.
- There was no change in the share of pavements rated "very good" or "excellent," but the share of pavements rated "poor" or "very poor" increased by 2 percent and the share rated "good" or "fair" decreased 2 percent. The shift is small in percentage terms, but it is significant enough to tip the regional average downward — and ever closer to the dividing line between the "good" and "fair" categories.
- The trend suggests Bay Area jurisdictions are not spending the money necessary to maintain the condition of

Pavement Conditions for Local Roadways, 2001–2004 (total pavement miles)



Excellent (PCI = 90–100) or Very Good (PCI = 75–89)
Pavements that have no distress and require mostly preventive maintenance

Good (PCI = 60–74) or Fair (PCI = 45–59)
Pavements in this middle range offer acceptable ride quality, though road surfaces are becoming worn to the point where rehabilitation is needed to prevent rapid deterioration.

Poor (PCI = 25–44) or Very Poor (PCI = 0–24)
Pavements that have extensive amounts of distress and require major rehabilitation or reconstruction

No Data

2004 Bay Area PCI = 62
The regional PCI score is an average of the scores of all participating jurisdictions, weighted by centerline miles.

Source: Metropolitan Transportation Commission

96 cities and nine counties reporting

PCI = pavement condition index, a measure of pavement distress

57 of 105 jurisdictions provided updated databases to MTC for 2004. For other jurisdictions, MTC used its pavement management system software to project 2004 conditions based on the latest data available.

local roadway pavement over time. Tight city budgets — and the failure of the state to pass along road maintenance funds authorized by the voters in 2002 under Proposition 42 — have forced many cities into a "worst first" approach, in which only the streets in the worst condition are repaired and preventive maintenance is forgone. This approach is increasingly expensive over time, since the cost of major repairs is about five times that of routine maintenance. In 2005, the state finally did pass along the Proposition 42 road maintenance funds, but these funds will have to continue to flow in subsequent years to make any significant dent in roadway maintenance needs.

- MTC estimates a cumulative backlog of $2.9 billion for local street and road repairs in the Bay Area. This represents the cost of upgrading pavement to the point where it is cost-effective to maintain, typically when PCI scores fall in the range of 75 to 85.

A Closer Look – Cities with the best and worst average pavement conditions in 2004 are shown below. Often a jurisdiction's low average pavement condition rating is the result of a roadway maintenance budget that is insufficient to cover a backlog of needs. The city of Dixon made its first appearance in the top 10 (since reporting began in 2001) and recorded the largest improvement in PCI, with an increase from 70 in 2003 to 84 in 2004. Gilroy (with a score of 82, up from 73 in 2003) also appeared in the top 10 for the first time in 2004. Larkspur and Half Moon Bay, which both ranked near the bottom in 2003, no longer appear in the bottom 10 in 2004. However, this is due less to improvement in pavement conditions than to the fact that other jurisdictions' conditions deteriorated.

Bay Area Jurisdictions With Best and Worst Pavement Conditions, 2004

Best	2004 PCI[1] (out of 100)	Worst	2004 PCI[1] (out of 100)
1. Brentwood	87	95. Lafayette	54
2. Contra Costa County (unincorporated)	85	San Mateo	54
Los Altos	85	Vallejo	54
4. Dixon	84	98. Monte Sereno	53
Oakley	84	Rio Vista	53
Santa Clara	84	100. City of Napa	52
7. Belvedere	83	101. Marin County (unincorporated)	50
Sunnyvale	83	102. Colma	47
9. Gilroy	82	Richmond	47
10. Campbell	80	104. Orinda	46
		105. Sonoma County (unincorporated)	44

Source: Metropolitan Transportation Commission

105 of 109 jurisdictions reporting

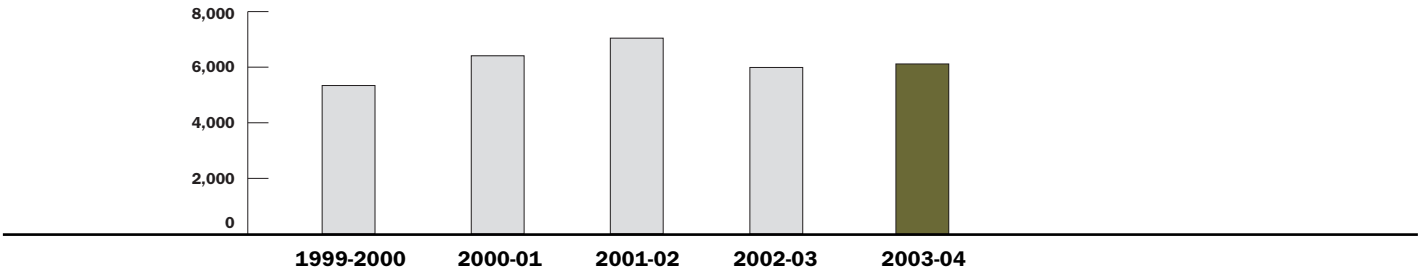
[1] PCI = pavement condition index; PCI of 100 = Excellent

Bus Reliability Improves While Rail Transit Slides; Long-Term Trend Is Positive

- The Bay Area's largest bus operators improved a key measure of reliability in 2003-04, while the performance of the major rail transit operators worsened. The average distance traveled between service calls for buses increased 6 percent, to 6,130 miles. But the average distance between rail service calls decreased 16 percent, to 6,060 miles. A service call occurs when a bus or train requires repair and cannot complete scheduled service.
- These results are consistent with the general trend since 1999-2000. With the exception of 2002-03, the number of miles traveled between bus service calls has increased steadily, resulting in a cumulative 22 percent increase over the five-year period. On the other hand, the number of miles between rail service calls has decreased a cumulative 14 percent over the same timeframe.

Service Calls — Six Largest Bay Area Transit Operators, Fiscal Years 1999-2000 – 2003-04

	Average Miles Between Service Calls						
	1999-2000	2000-01	2001-02	2002-03	2003-04	FY 2002-03–2003-04	FY 1999-2000–2003-04
Rail[1]	7,080	6,920	6,470	7,250	6,060	–16%	–14%
Bus[2]	5,020	6,310	7,150	5,760	6,130	+6%	+22%
Rail and Bus[3]	**5,340**	**6,410**	**7,040**	**5,990**	**6,120**	**+2%**	**+15%**



Source: Transit Operators

[1]Includes BART, VTA light rail, Muni light rail

[2]Includes AC Transit, SamTrans, Muni, Valley Transportation Authority (VTA), Golden Gate Transit

[3]Combined "Rail and Bus" average is weighted by revenue vehicle miles of service.

Note: Reliability improves as the average number of miles between service calls increases

- Because buses account for approximately 83 percent of regional transit service (measured in revenue service miles) while rail transit accounts for approximately 17 percent, the considerable improvements in bus performance more than counterbalance the decline in rail performance. As a result, the average miles between service calls for the bus and rail operators combined increased 2 percent between 2002-03 and 2003-04 and 15 percent over the longer time period from 1999-2000 to 2003-04.

Airports and Seaports

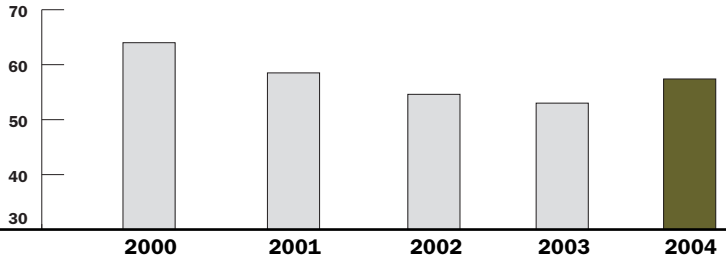
The Bay Area has three major airports (San Francisco International Airport, Oakland International Airport and San Jose International Airport) and four major seaports (San Francisco, Oakland, Redwood City and Richmond). Airports and seaports are included in this report because they serve as regional gateways and generate considerable ground traffic by cars, trucks and rail. Statistics on air passengers and air and marine cargo are presented to track changes in traffic generated by airports and seaports.

Air Passenger and Cargo Volumes Rebound in 2004, Reversing Three-Year Slide; Both Measures Still Below 2000 Levels

- Passenger and freight activity at Bay Area airports increased in 2004 for the first time since 2000. The number of air passengers increased 8 percent from 2003 and the volume of air cargo increased 3 percent. However, regionwide, air cargo and air passenger volumes still have not returned to the levels reached in 2000, prior to the dot-com economic implosion and the September 11, 2001 terrorist attacks.
- San Francisco International Airport — which processes more than half the region's air passengers and which had been hit hardest by the dropoff in volume — experienced the biggest rebound in 2004, with the number of air passengers increasing by 12 percent. At San Jose International Airport, air passenger volumes climbed 4 percent after several years of decline. Passenger volumes remain well below 2000 levels at both airports.

Air Passengers at Bay Area Airports, 2000–2004

	Millions of Passengers[1]					Percent Change	
Airport	**2000**	**2001**	**2002**	**2003**	**2004**	**2003–2004**	**2000–2004**
San Francisco	40.3	34.0	30.8	28.8	32.2	+12%	–20%
Oakland	10.6	11.4	12.7	13.5	14.1	+4%	+33%
San Jose	13.1	13.1	11.1	10.7	11.1	+4%	–15%
Total	**64.0**	**58.5**	**54.6**	**53.0**	**57.4**	**+8%**	**–10%**



Sources: Port of Oakland, San Jose International Airport, San Francisco International Airport.

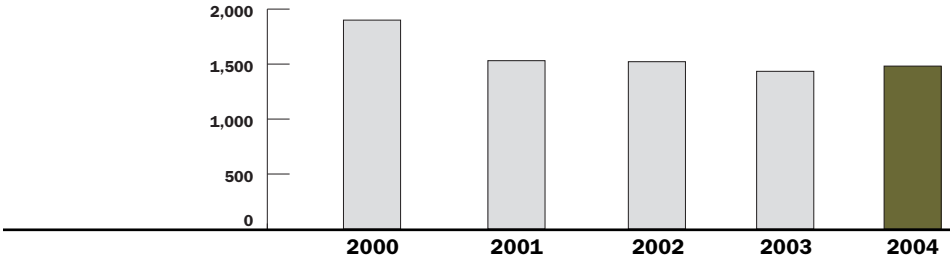
[1]Measured by enplanements and deplanements.

- Oakland International Airport continued its well-established pattern of steady annual growth in the number of air passengers served. In 2004, the volume of air passengers increased by 600,000 at the East Bay airport, an increase of 4 percent over the year-earlier level. The cumulative growth since 2000 has been an impressive 33 percent, boosting Oakland International's share of the regional air passenger market from 17 percent in 2000 to 25 percent in 2004.

- Air cargo volume in 2004 increased a healthy 9 percent at Oakland International Airport — the only one of the three Bay Area airports to see an increase. The volume of cargo at San Jose International held steady at 120,000 tons, while San Francisco International witnessed a 2 percent decrease in air cargo tonnage. Overall, the 3 percent increase in regional air cargo volume was not as robust as the growth in air passenger traffic. And the 2004 total (1.5 million tons) remains 22 percent below 2000 levels.

Air Cargo at Bay Area Airports, 2000–2004

	Thousands of Tons of Cargo[1]					Percent Change	
Airport	**2000**	**2001**	**2002**	**2003**	**2004**	**2003–2004**	**2000–2004**
Oakland	775	671	717	682	742	+9%	–4%
San Francisco	962	701	650	632	620	–2%	–35%
San Jose	163	159	155	120	120	0%	–26%
Total	**1,900**	**1,531**	**1,522**	**1,434**	**1,482**	**+3%**	**–22%**



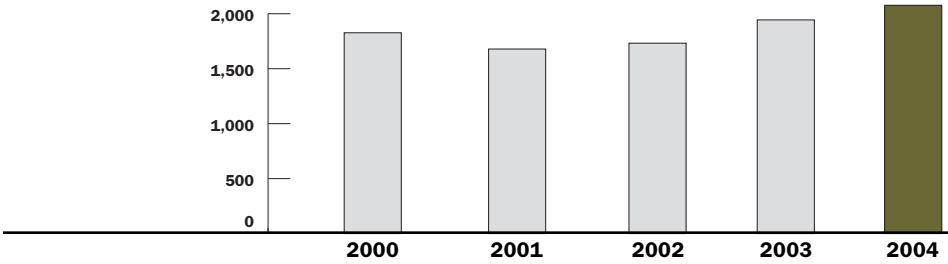
Sources: Port of Oakland, San Jose International Airport, San Francisco International Airport
[1]One ton = 2,000 pounds

Bay Area Ports See Healthy Growth in Both Container and Bulk Cargo Sectors

- The volume of cargo handled by the Bay Area's four largest seaports increased by healthy margins in 2004. The amount of container cargo shipped through the ports of Oakland and San Francisco grew by 7 percent, and the volume of bulk freight passing through these ports, plus the ports of Richmond and Redwood City, jumped 23 percent. *(Note: Bulk marine cargo also passes through the Port of Benicia, but in substantially smaller volumes than at the four largest ports. This report does not include data from the Port of Benicia.)*
- In the Bay Area, container cargo trends are driven by the Port of Oakland, which accounts for nearly 99 percent of container cargo in the region. In 2004, the number of containers processed by the Oakland port increased 6 percent, passing the 2 million mark for the first time. Since 2000, container traffic at the Port of Oakland has increased by 15 percent. Goods imported in containers include electronics, toys and cloth. Container exports include agriculture products, scrap metal, waste paper and electronics from the Silicon Valley.

Container Marine Cargo at Bay Area Seaports, 2000–2004

	Thousands of TEU[1] Containers					Percent Change	
Seaport	**2000**	**2001**	**2002**	**2003**	**2004**	**2003–2004**	**2000–2004**
Oakland	1,777	1,644	1,708	1,923	2,045	+6%	+15%
San Francisco	50	35	24	21	32	+53%	–36%
Total	**1,827**	**1,679**	**1,732**	**1,944**	**2,077**	**+7%**	**+14%**

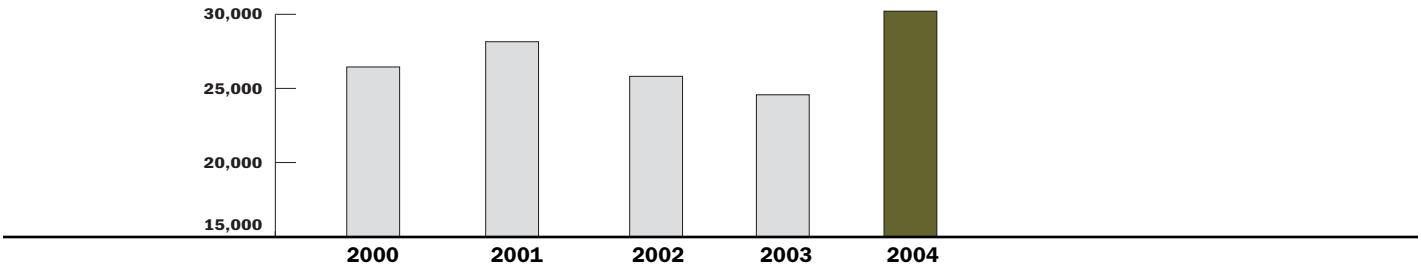


Sources: Ports of Oakland and San Francisco
[1]TEU = Twenty-foot equivalent

- In contrast to container cargo, which has grown steadily since the double-whammy year (dot-com bust and September 11th terrorist attacks) of 2001, Bay Area bulk cargo suffered declines in both 2002 and 2003. In 2004, the volume of bulk cargo jumped by 23 percent, reversing this downward trend and climbing to the highest level of the last five years.
- The bump in bulk cargo volume was due largely to growth at the Port of Richmond, which handles roughly 80 percent of the region's bulk sea cargo. Bulk cargo shipments at the Port of Richmond increased 25 percent to over 25 million tons. As well, bulk cargo shipments increased significantly (11 percent and 31 percent, respectively) at the ports of San Francisco and Redwood City. Only the Port of Oakland saw a decrease in volume, and this by only 1 percent. Over the five-year period from 2000 to 2004, the total amount of sea cargo shipped through the ports of Richmond, Redwood City, San Francisco and Oakland increased by 14 percent.

Bulk Marine Cargo at Bay Area Seaports 2000–2004

	Thousands of Tons of Bulk Cargo					Percent Change	
Seaport	**2000**	**2001**	**2002**	**2003**	**2004**	**2003–2004**	**2000–2004**
Richmond	22,541	24,185	21,977	20,269	25,313	+25%	+12%
Redwood City	1,102	1,124	1,016	1,509	1,977	+31%	+79%
San Francisco	942	925	1,379	1,364	1,518	+11%	+61%
Oakland	1,861	1,902	1,445	1,441	1,424	–1%	–23%
Total	**26,446**	**28,136**	**25,817**	**24,583**	**30,232**	**+23%**	**+14%**



Sources: Ports of Oakland, Redwood City, Richmond, San Francisco
Note: One ton = 2,000 pounds

Appendix A:
Notes on Data Collection

NOTES ON DATA COLLECTION

This compendium of key data on the state of the Bay Area transportation system is intended to provide the best snapshot possible, given existing information collected by Bay Area transportation agencies. Because the data have been gathered by multiple sources, responding to varying requirements, differences exist with respect to methodology, frequency, time period covered, level of detail and other variables. Following are some general comments, plus specific discussions of data by category.

Time Period Covered

Most data is collected and reported by calendar year (January 1 to December 31). Transit data is collected and reported by state fiscal year (July 1 to June 30), as is the custom for accounting purposes. Every effort was made to assemble consistent data for the five-year period 2000 through 2004 (or, for data collected by fiscal year, 1999-2000 through 2003-04).

Future Data Collection

In the future, the authors expect to collect supplemental data to fill gaps in the existing data. For example, traffic volumes on local roadways are not included in this report. While individual cities and counties collect traffic counts for various purposes, there is little consistency among jurisdictions in the timing or location of data collection. As a result, it is extremely difficult to aggregate the data and summarize it at the regional level. In 2003, MTC began to collect traffic volumes on a selected set of local roadways at county borders to establish a trend line.

Additionally, emerging technologies are beginning to make more complete data available and promise to contribute even more significantly in the future. Examples of emerging data collection technologies that are expected eventually to improve data in future reports include the following.

- Sensors embedded in the pavement and on the roadside of many Bay Area freeways already continuously count vehicles and monitor travel speeds on freeways. Automated data from these sensors is available 24 hours a day, 365 days a year, giving us a much more accurate understanding of roadway conditions compared to areas not yet equipped with sensors, where traffic counts are taken just a few days a year. Caltrans has developed the ability to use traffic data from these sensors to measure traffic congestion continuously. Currently traffic congestion data is collected just a few, "typical" days a year due to the high costs of the current data collection method in which trained personnel drive specially equipped vehicles over congested segments of Bay Area freeways.

- In March 2004, the 511 Driving Times℠ system began using FasTrak™ electronic toll tags installed in autos and trucks to estimate the time it takes to travel between fixed points on the freeway, 24 hours a day, 365 days a year. Current information on freeway travel time reflects typical weekday conditions when no collisions occur. With this data it will be possible to measure variation in travel time on weekdays and weekends and account for congestion caused by road construction and collisions.

- Cities are deploying "smart" traffic signal systems that continuously count vehicles on local roadways. These systems are deployed on only a small subset of streets, however, so most traffic counts on local roadways will continue to be done by traditional methods on an occasional basis.

- Transit fleet-management systems will track the times that buses and trains arrive and depart transit stops. By comparing these times to transit schedules, the systems will generate more complete on-time performance statistics.

Data Collection Techniques Used for This Report

System in Brief

Population and Employment Trends (page 3)

Population data is taken from the California Department of Finance estimates. The estimates in this report reflect popula-

tion as of July 1 of each year. City and county population estimates are available at: www.dof.ca.gov/HTML/DEMOGRAP/repndat.asp.

Employment data is taken from the California Employment Development Department (EDD) "Wages and Salary" data series. EDD estimates annual employment by industry based on reports by employers. Self-employed workers, unpaid family workers, private household workers, and individuals on unpaid leave from work are not included in the data. Because it is the number of jobs rather than workers that is reported, workers holding more than one job may be counted more than once. Employment data is published on the EDD Web site at: www.calmis.cahwnet.gov./htmlfile/msa.htm.

Commute Mode Share (page 5)

The U.S. Census Bureau collects data on commute behavior including mode of travel. In 2000, the Census Bureau began a pilot program, called the American Community Survey, to collect data on an annual basis rather than a 10-year cycle. The American Community Survey collects all the information currently measured by the decennial census long form, including commute characteristics. Advantages of the American Community Survey over the decennial long form include annual updates and faster release of data. Disadvantages include a smaller sample set and potentially less-accurate results than the decennial census. However, the sample size for the American Community Survey still far surpasses any other surveys of commute behavior and thus is believed to be the most accurate information available. The American Community Survey is scheduled to begin full implementation in 2005. Data collected by the U.S. Census Bureau is available at: factfinder.census.gov/home/saff/main.html?_lang=en.

Mobility: Getting Around the Bay Area

Freeway Congestion (pages 8–11)

The measure used to indicate congestion is daily vehicle hours of delay. Delay occurs when the average speed falls below 35 miles per hour for 15 minutes or more. This data has been collected every year since 1981 (except for 1985 and 1997, when budget limitations forced Caltrans to forgo the program). Trained personnel drive specially equipped vehicles on the freeway system during morning and evening commute hours to collect information on average travel speeds and travel times, which is then used to calculate daily delay. Data is collected on Tuesdays, Wednesdays and Thursdays during the spring and fall of each year. Due to budget limitations in 2004, congestion monitoring was performed for only the most congested portions of the region's freeway system.

Commuter Perceptions (page 9)

The data reflecting year-to-year changes in Bay Area commuters' attitudes toward their commutes is taken from Commute Profile 2005, a telephone survey conducted by MTC's Regional Rideshare Program. The regionwide survey contains information on commuter behavior and the factors that influence commute decisions. Sampled in the 2005 survey were approximately 3,600 Bay Area adults who are employed full-time outside the home. The 2005 Commute Profile report includes a complete description of the survey methodology and the confidence level. Copies of the report can be downloaded from the MTC Web site at: www.mtc.ca.gov/library/commute_profile/commuteprofile_2005.pdf.

Bridge and Freeway Traffic Volumes (pages 12–13)

The Bay Area Toll Authority, which oversees the collection of tolls on state-owned bridges in the Bay Area, tracks the number of vehicles crossing each of the seven state-owned bridges. Traffic counts reflect vehicle crossings in the tolled direction for accounting purposes. The Golden Gate Bridge, Highway and Transportation District tracks this number for the Golden Gate Bridge. The average daily traffic for each bridge is the total annual traffic divided by 365 days. Data on traffic and revenue for the seven state-owned bridges is available on the Bay Area Toll Authority Web site at: bata.mtc.ca.gov/tolls.htm. Data on traffic and revenue for the Golden Gate Bridge is available on the Web at: goldengatebridge.org/research/GGBTraffToll.php.

The annual average daily traffic volume is the number of vehicles that pass by a given freeway location divided by the number of days on which vehicles were counted, including weekdays and weekends. Ideally, vehicles are counted 365

days a year; however, in practice the counting equipment may be out of service some days due to maintenance or other factors. The traffic volumes included in this report are for locations with permanent count stations. Only a small number of locations have permanent counters that provide data on a continuous basis from year to year. Caltrans collects traffic counts at other freeway and state highway locations with electronic instruments that are moved from location to location throughout the state on a seven-year cycle. Locations with these cyclic traffic counts were omitted from this report because the data does not show year-to-year trends. The complete database of traffic volumes throughout the state is available on the Caltrans Web site at www.dot.ca.gov/hq/traffops/saferesr/trafdata/.

Carpool Lanes — Time Savings and Usage (pages 14–17)

Caltrans District 4 collects data on carpool-lane usage and travel-time savings annually. Data on lane usage is compiled from direct observations by people situated on the side of the freeway adjacent to the carpool lanes. Travel-time savings are computed by comparing travel time in the carpool lane with that in the adjacent mixed-flow lanes during the peak morning and evening commute hours. For carpool lanes that are not congested, travel time is based on the speed limit on the freeway. For carpool lanes that are congested, Caltrans drives specially equipped "floating cars" to record travel time and speed. The same "floating car" technique is used to measure the travel time in adjacent mixed-flow lanes. Caltrans District 4 publishes a report annually with complete data on carpool-lane usage and travel-time savings. The report also includes detailed information on the hours of operation, number of people using the carpool lane compared to adjacent general purpose lanes, and violation rates. The Caltrans District 4 reports can be found at: www.dot.ca.gov/dist4/reports.htm.

Local Traffic (pages 18–19)

Under state law, county congestion management agencies are charged with monitoring congestion on local roadways. Two Bay Area counties, Sonoma County and Napa County, have exercised an option in the law to opt out of this requirement. The remaining seven counties monitor congestion on local roadways and publish the results at least every two years in a county congestion monitoring report. Most counties report in odd-numbered years; Alameda, Contra Costa and Santa Clara counties typically report in even-numbered years.

The congestion management agencies measure local roadway congestion by calculating the "level of service" on a selected set of high-priority roads during peak commute periods. Level of service describes traffic conditions based on speed and travel time, volume and capacity, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Level of service is expressed in grades from A through F, with level of service A representing the best operating conditions and level of service F the worst. At level of service A, B and C, traffic flows smoothly and delay is minimal. This report characterizes these conditions as "uncongested." At level of service D and E, traffic flow becomes unstable, conditions characterized in this report as "moderately congested." At level of service F, traffic is stop-and-go, characterized in this report as "severely congested."

The level of service grade is assigned based on the delay experienced by vehicles traveling through major intersections or on average travel speeds over selected segments of local roadways. It is noteworthy that the procedures for monitoring local roadway level of service are established on a county-by-county basis. As a result, it is more appropriate to compare the results for each county from year to year than it is to compare results across different counties. Links to congestion management agencies for counties in the Bay Area may be found on the MTC Web site at www.mtc.ca.gov/links/regional.htm.

Transit On-Time Performance (pages 20–21)

Transit operators monitor on-time performance as a measure of the quality of the service they provide. Like most data on transit operations, on-time performance is reported by fiscal year. Data is usually collected by persons who record the arrival time of individual transit vehicles at key stops. (BART's central computer system automates collection of on-

time performance data.) On-time performance data is used by operators primarily as an internal management tool. When deteriorating on-time performance can be traced back to increasing roadway congestion, the data may be used to develop more realistic, revised schedules. San Francisco Muni publishes on-time performance data in its quarterly performance reports as required under Proposition E, passed by San Francisco voters in 1999.

Transit Ridership (pages 22–23)

This report uses transit boardings as a measure of ridership. A boarding refers to each time a passenger enters a transit vehicle or train station. One person may board multiple vehicles to complete a trip. Methods used to collect this ridership data include tracking transit fare receipts and hiring people to count passenger boardings. Transit operators report ridership for each fiscal year to the Federal Transit Administration for inclusion in the National Transit Database. National Transit Database publications and data can be found at: www.ntdprogram.com. MTC summarizes transit ridership and other operating statistics for Bay Area operators in its annual report, *Statistical Summary of Bay Area Transit Operators,* which covers a rolling five-year period and may be viewed at: www.mtc.ca.gov/library/statsum/statsum.htm.

Safety

Motor Vehicle Collisions and Motor Vehicle Collisions Involving Pedestrians or Cyclists (pages 26–29)

The California Highway Patrol (CHP) maintains the most complete data on motor vehicle collisions, including those that involve pedestrians or cyclists. The database, called Statewide Integrated Traffic Records System, includes injuries and fatalities resulting from all collisions reported to local law enforcement as well as the Highway Patrol. The Highway Patrol publishes the series *Annual Report of Fatal and Injury Motor Vehicle Traffic Collisions,* which includes summary statistics by county and for the entire state. This is available on the Web at: www.chp.ca.gov/html/publications.html. Data at a less aggregated level can be requested from the CHP.

State of Repair

State Highway Pavement Conditions (pages 32–33)

Caltrans conducts an annual survey of the pavement condition on all state-owned roads in California. Roads are inspected visually for potholes and cracks that indicate damage to the road structure lying beneath the pavement. In addition, Caltrans measures the comfort of the ride on the pavement using roving vehicles that measure the smoothness of the road. Because road structure and ride quality are not always positively correlated — for example a road with poor ride quality may not have any structural damage — both factors are considered in determining which roads are in need of repair. The results of the pavement condition survey are published by Caltrans in the *State of the Pavement* report series published by the Caltrans Division of Maintenance and available at: www.dot.ca.gov/hq/maint/roadway.htm. Pavement condition data is reported by calendar year.

Local Roadway Pavement Conditions (pages 34–35)

Most Bay Area jurisdictions use MTC's Pavement Management System, or an equivalent system, to track conditions of streets and roads and develop cost-effective repair schedules. MTC's Pavement Management System measures pavement conditions according to a pavement condition index (PCI) that ranges from 0 to 100, where 100 is the best possible score. Surveyors record the type and severity of pavement distresses, such as cracking, weathering and patching through physical inspections. This information is then entered into the Pavement Management System to calculate the PCI.

The characterization of pavement conditions in 2004 is based on the most recent data submitted to MTC by local jurisdictions. For those jurisdictions (57 in number) that had their last inspections done in 2004, the PCI scores were considered current. For the remaining jurisdictions — those whose most recent inspections were done in years prior to 2004 — MTC staff used its Pavement Management System software to project PCI scores forward to 2004, relying on estimates (provided by individual jurisdictions or by the State Controller's Office) of revenue available to each jurisdiction for local roadway maintenance.

Notes on Data Collection (continued)

Transit Service Calls (pages 36–37)

A service call occurs any time transit service is disrupted because a transit vehicle cannot complete a scheduled trip or cannot start the next scheduled trip. Transit operators report total service calls to the Federal Transit Administration as part of the National Transit Database. Operators also report the miles of service provided annually (annual revenue service miles) as part of the National Transit Database. MTC used these data to calculate the total number of service calls per million miles of service provided by the seven largest bus and rail operators.

Airports and Seaports

Airport Passenger and Cargo Volumes (pages 40–41)

Statistics on airport passengers are based on information supplied to the airports from the airline carriers' computer reservation systems. These numbers are in turn used to collect landing fees from the carriers and for planning efforts at the airports. Statistics on air cargo are reported by private carriers to the airports. Private carriers (e.g., Federal Express, UPS) submit tonnage reports to the airports for planning and billing purposes.

Seaport Marine Cargo Volumes (pages 42–43)

Private operators at the ports collect data on marine cargo. For bulk goods, tonnage is tracked and used by the ports to collect fees. For containers, fees are paid to the port based on the contents of the containers and the number of total containers is tracked for planning purposes.

Appendix B:
Congested Freeway Locations – Morning and Evening Commutes, 2004

Morning Peak-Period Congested Locations, 2004 (ordered by county and route)

COUNTY	ROUTE	DIR.	DAILY DELAY (vehicle hours)	DURATION (AM)	LOCATION
ALA	24	E	730	6:35–9:45	East of Route 13 to Gateway Boulevard
ALA	24	W	150	7:55–9:00	North of Telegraph Avenue to I-580
ALA/CC	80	W	10,080	5:50–10:25	Route 4 to Bay Bridge metering lights
ALA	84	S	80	5:30–9:30	At Dumbarton Bridge toll plaza*
ALA	92	W	130	7:50–9:20	At San Mateo-Hayward Bridge toll plaza*
ALA	238	N	260	5:50–8:55	I-580 to south of I-880 southbound off-ramp*
ALA	238	S	70	7:15–8:15	I-880 to south of Castro Valley Boulevard*
ALA/CC	580	E	110	6:50–9:25	Central Avenue to Buchanan Street*
ALA	580	W	430	5:43–7:15	East of I-205 interchange to west of Grant Line Road
ALA	580	W	5,120	5:55–9:05	North Flynn Road to west of Airway Boulevard
ALA	580	W	360	6:45–9:15	Hopyard Road to I-680*
ALA	580	W	380	6:25–8:10	Strobridge Avenue to Route 238*
ALA	580	W	250	7:10–8:50	35th Avenue to east of Lakeshore
ALA	580	W	250	7:35–9:20	Route 24 interchange to I-80 interchange
ALA	680	N	130	7:50–9:00	At I-580 and at Alcosta Boulevard*
ALA	880	N	2,190	6:20–9:30	West Grand Avenue to south of Maritime Street
ALA	880	N	540	6:50–8:30	Decoto Road to south of Tennyson Road
ALA	880	N	170	7:35–9:10	Route 92 to south of Hesperian Boulevard*
ALA	880	N	220	7:15–9:50	Route 238 to Davis Street and at Hegenberger Road*
ALA	880	N	280	7:50–9:00	Hegenberger Road to High Street*
ALA	880	S	1,860	6:55–10:25	Stevenson Boulevard to Mission Boulevard
ALA	880	S	700	8:20–10:00	Industrial Parkway to Stevenson Boulevard
ALA	880	S	1,240	7:45–10:20	South of Marina Boulevard to Route 92
CC	4	W	420	6:45–8:45	Bailey Road to Willow Pass Road*
CC	4	W	3,600	5:20–9:18	Lone Tree Way to west of Loveridge Road
CC	24	W	70	6:35–8:15	Camino Pablo to Gateway Boulevard
CC	24	W	220	7:35–9:05	I-680 to east of Laurel Drive*
CC	242	S	100	6:45–8:30	Concord Avenue to I-680*
CC	580	W	270	6:15–8:55	Marine Street undercrossing to Richmond-San Rafael Bridge toll plaza*
CC	680	N	290	7:40–8:50	South of Crow Canyon Road to El Pintado Road

* Segment monitored in 2003

County abbreviations: ALA=Alameda; CC=Contra Costa; MRN=Marin; SCL=Santa Clara; SF=San Francisco, SM=San Mateo; SOL=Solano; SON=Sonoma

Morning Peak-Period Congested Locations, 2004 (continued)

COUNTY	ROUTE	DIR.	DAILY DELAY (vehicle hours)	DURATION (AM)	LOCATION
CC	680	S	1,220	7:00–9:10	North of South Main Street to north of El Pintado Road
CC	680	S	820	6:25–8:50	Willow Pass Road to Geary Road
CC	680	S	540	8:40–8:20	Benicia-Martinez Bridge toll plaza to Contra Costa Boulevard
MRN	101	S	3,110	6:40–9:35	North of Route 37 to I-580
SCL	17	N	150	7:45–8:40	North of Camden Avenue*
SCL	85	N	210	6:40–9:20	At Bernal Road on-ramp (metering lights)*
SCL	85	N	390	7:10–9:15	Almaden Expressway to Union Avenue*
SCL	85	N	470	7:10–9:50	Route 17 to Saratoga Avenue*
SCL	85	N	120	7:20–8:45	North of Saratoga Avenue and at De Anza Boulevard*
SCL	85	N	510	7:00–9:45	I-280 to El Camino Real and at U.S. 101*
SCL	87	N	100	8:50–10:00	Curtner Avenue to Almaden Expressway*
SCL	101	N	340	6:15–7:35	South of San Martin Avenue to south of Cochrane Road
SCL	101	N	950	6:40–8:50	North of Bernal Road to north of Tully Road
SCL	101	N	2,560	6:35–9:55	I-280 to north of Trimble Road
SCL	101	N	380	7:30–9:15	Ellis Street to Route 85*
SCL	101	N	300	6:40–9:10	At San Antonio Road*
SCL	237	E	180	7:50–9:20	At Mathilda Avenue and at I-880 southbound off-ramp connector*
SCL	237	W	340	7:20–9:10	I-880 split to Zanker Avenue*
SCL	280	N	150	7:15–8:15	U.S. 101 to Reed Street*
SCL	280	N	410	6:50–9:10	Meridian Avenue to I-880*
SCL	680	N	60	7:40–8:20	Capitol Expressway to McKee Road*
SCL	680	S	200	7:40–8:45	At U.S. 101*
SCL	880	N	90	7:15–9:30	North First Street to Brokaw Road
SCL	880	S	50	7:40–8:40	Montague Expressway to Brokaw Road*
SF	80	E	1,180	7:10–10:10	U.S. 101 to Sterling Street
SF	80	W	430	7:55–9:20	East of Treasure Island to Fremont Street
SF	101	N	310	7:15–9:05	North of Cesar Chavez Street to Mission Street
SF	101	S	10	6:55–8:00	At I-80*
SF	280	N	280	6:40–8:15	Alemany Boulevard to U.S. 101*
SF	280	N	180	7:30–9:15	Mariposa Street to King Street*
SM	101	N	600	7:30–9:30	Willow Road to Woodside Road*
SM	101	N	1,530	7:10–9:25	Route 92 interchange to Third Avenue

* Segment monitored in 2003

County abbreviations: ALA=Alameda; CC=Contra Costa; MRN=Marin; SCL=Santa Clara; SF=San Francisco, SM=San Mateo; SOL=Solano; SON=Sonoma

Morning Peak-Period Congested Locations, 2004 (continued)

COUNTY	ROUTE	DIR.	DAILY DELAY (vehicle hours)	DURATION (AM)	LOCATION
SM/SCL	101	S	1,370	7:20–9:20	North of Marsh Road to Route 85 interchange
SM/SCL	101	N	110	7:10–9:45	At University Avenue
SM	101	S	1,170	7:05–9:25	North of Route 92 to Marine Parkway
SM	280	S	290	7:15–8:50	Route 1 to Avalon Drive*
SOL/SON	37	W	70	6:40–9:40	At Skaggs Island Road and at Sonoma/Solano county line*
SOL	37	W	220	6:10–8:15	Mare Island Interchange to post mile 6 and post mile 4 to Skaggs Island*
SOL	80	W	320	5:50–7:45	Solano Avenue to Carquinez Bridge toll plaza*
SOL	80	W	350	6:15–8:20	Abernathy Road to west of Route 12*
SON	101	N	370	7:20–9:10	Route 116 to Golf Road and Hearn Avenue to College Avenue*
SON	101	S	990	5:35–8:20	South of Redwood Highway to north of Kastania Road
SON	101	S	80	7:25–8:50	End of HOV lane to Wilfred Avenue*
SON	101	S	430	7:10–9:10	Airport Boulevard to south of River Road*

* Segment monitored in 2003

County abbreviations: ALA=Alameda; CC=Contra Costa; MRN=Marin; SCL=Santa Clara; SF=San Francisco, SM=San Mateo; SOL=Solano; SON=Sonoma

Evening Peak-Period Congested Locations, 2004 (ordered by county and route)

COUNTY	ROUTE	DIR.	DAILY DELAY (vehicle hours)	DURATION (PM)	LOCATION
ALA	24	E	1,730	3:40–6:40	I-580 to Caldecott Tunnel
SF/ALA	80	E	2,430	2:35–7:00	West of Treasure Island to east of Powell Street
ALA	80	E	2,150	3:10–6:25	I-580 interchange to Gilman Street
ALA/SF	80	W	2,180	4:20–7:00	At Bay Bridge toll plaza and incline section of Bay Bridge to Fifth Street*
ALA	80	W	1,250	2:20–5:35	Gilman Street to south of I-580 interchange
ALA	84	N	160	3:25–6:15	Newark Boulevard to I-880*
ALA	92	E	3,760	3:35–7:55	Clawiter Road to I-880 interchange
ALA	238	N	190	2:50–6:45	I-580 to south of I-880*
ALA	238	S	450	3:45–6:35	I-880 to Castro Valley Boulevard*
ALA	580	E	2,370	3:25–7:20	East of Livermore to east of Greenville Road*
ALA	580	E	4,320	2:55–6:40	Hopyard Road to west of El Charro Road*
ALA	580	E	450	5:00–6:15	Route 24 to Coolidge Avenue
ALA	580	W	40	3:20–5:55	Strobridge Avenue to Route 238
ALA	680	N	660	3:15–6:15	Route 262 to Washington Avenue*
ALA	880	N	1,730	4:50–5:50	Thornton Avenue to north of Fremont Boulevard
ALA	880	N	220	4:05–5:50	Mowry Avenue to south of Route 84*
ALA	880	N	1,420	3:25–6:45	Route 84 to Industrial Boulevard*
ALA	880	N	470	4:25–6:35	At A Street and at Route 238 interchange*
ALA	880	N	270	3:15–4:15	North of Coliseum Way to north of High Street
ALA	880	S	390	3:45–6:30	North of Route 92 to Route 84
ALA	880	S	420	4:00–6:25	At Hesperian Boulevard and A Street to Route 92*
ALA	880	S	410	4:45–6:15	Hegenberger to 98th Avenue and Davis Street to Marina Boulevard and at Route 238*
ALA	880	S	370	4:45–6:15	Oak Street to Embarcadero and at Fruitvale Avenue and at 42nd Avenue*
CC	4	E	990	4:05–6:05	Pacheco Boulevard to east of Port Chigago Highway
CC	4	E	2,340	3:35–6:55	East of Bailey Road to East of Somersville Road
CC	24	E	190	3:50–6:00	At Acalanes and at I-680*
CC	24	W	820	4:05–6:30	West of Camino Pablo to Fish Ranch Road
CC/ALA	80	E	530	4:00–6:30	Buchanan Street to San Pablo Avenue*
CC	80	E	250	4:25–6:00	El Portal Road to Pinole Valley Road*
CC	680	N	620	4:00–6:35	North of Bollinger Canyon Road to Sycamore Valley Road*

* Segment monitored in 2003

County abbreviations: ALA=Alameda; CC=Contra Costa; MRN=Marin; SCL=Santa Clara; SF=San Francisco, SM=San Mateo; SOL=Solano; SON=Sonoma

Evening Peak-Period Congested Locations, 2004 (continued)

COUNTY	ROUTE	DIR.	DAILY DELAY (vehicle hours)	DURATION (PM)	LOCATION
CC	680	N	710	3:30–6:00	El Pintado Road to north of Livorna Road*
CC	680	N	1,040	4:15–5:50	Livorna Road to north of North Main Street
CC	680	N	980	4:40–6:05	Burnett Avenue to Concord Avenue
CC	680	S	330	4:55–6:25	Route 24 to north of Livorna Road
MRN	101	N	2,680	3:05–5:55	Route 1 to north of I-580*
MRN	101	N	550	3:20–6:25	Atherton Avenue to north of beginning of expressway*
MRN	101	N	300	3:15–6:25	North of San Antonio Road*
MRN	101	S	180	4:30–6:55	South of Waldo Tunnel to San Francisco county line*
MRN	580	W	590	2:40–6:50	Bellam Road to U.S. 101*
SCL	17	S	100	4:20–6:00	North of Hamilton Avenue*
SCL	85	S	30	5:40–6:50	At Route 87*
SCL	85	S	280	4:20–6:45	Route 17 to south of Union Avenue*
SCL	85	S	490	3:40–6:50	Stevens Creek Boulevard to De Anza Boulevard*
SCL	85	S	720	4:45–6:55	Evelyn Avenue to south of Fremont Avenue
SCL	87	S	1,470	2:50–6:25	North of Julian Street to Lelong Street
SCL	101	N	560	4:10–6:20	University Avenue to Ellis Street
SCL	101	S	1,500	3:30–6:35	Julian Street/McKee Road to Capitol Expressway
SCL	101	S	1,940	3:35–5:55	North of San Tomas Expressway to south of 13th Street
SCL	101	S	2,370	3:55–7:10	University Avenue to south of Shoreline Boulevard
SCL	237	E	220	3:30–7:10	Great America to North First Street
SCL	237	E	400	3:30–7:10	At I-880 connector*
SCL	237	W	340	5:00–6:45	McCarthy Boulevard to North First Street and Mathilda Avenue to U.S. 101*
SCL	280	S	530	4:50–6:30	Moorpark Avenue East to 11th Street*
SCL	280	S	310	4:45–6:40	At De Anza Boulevard and at Saratoga Avenue*
SCL	280	S	140	5:10–6:30	El Monte Road to north of Magdalena Avenue*
SCL	680	S	400	5:10–6:10	North of Calaveras Road to south of Berryessa Road
SCL	880	N	1,400	4:00–7:10	Montague Expressway to north of Dixon Landing Road*
SCL	880	S	190	5:10–6:50	U.S. 101 to First Street and Route 82 to north of Bascom Avenue*
SCL	880	S	1,400	4:00–7:10	Montague Expressway to north of Dixon Landing Road
SF	80	E	3,470	2:30–7:25	U.S. 101 to Sterling Street
SF	80	W	410	3:55–6:45	5th Street to U.S. 101

* Segment monitored in 2003

County abbreviations: ALA=Alameda; CC=Contra Costa; MRN=Marin; SCL=Santa Clara; SF=San Francisco, SM=San Mateo; SOL=Solano; SON=Sonoma

Evening Peak-Period Congested Locations, 2004 (continued)

COUNTY	ROUTE	DIR.	DAILY DELAY (vehicle hours)	DURATION (PM)	LOCATION
SF	101	N	370	4:35–6:20	South of Cesar Chavez Street to I-80
SF	101	S	1,060	4:20–7:10	South Van Ness Avenue to north of 10th Street and I-80 to Cesar Chavez Street
SF	280	S	260	4:30–6:15	U.S. 101 to Alemany Boulevard*
SF	280	S	150	4:50–6:30	Mariposa Street to Pennsylvania Avenue*
SM	92	W	80	5:15–6:15	U.S. 101 to Delaware Street*
SM	101	N	1,470	4:40–6:55	South of Holly Street to Route 92
SM	101	N	420	4:55–6:35	Route 92 to Third Avenue and Anza Boulevard to north of Broadway
SM	101	S	50	4:50–5:50	At Woodside Road and at Willow Street*
SM	101	S	310	3:30–6:30	At Poplar Avenue*
SM	101	S	200	3:20–6:00	Millbrae Avenue to Bridgeway*
SM	280	N	210	5:30–6:30	Sandhill Road to Woodside Road and north of Woodside Road*
SM	280	N	160	5:20–6:40	I-380 to Westborough Boulevard*
SM	380	W	100	5:00–6:40	At I-280*
SOL	80	E	220	3:35–6:40	At Carquinez Bridge toll plaza*
SOL	80	E	840	3:50–5:50	I-680 to Cordelia truck scales
SOL	80	E	230	4:30–6:30	East of Magellan Road to east of Travis Boulevard*
SOL	680	N	620	3:10–6:35	South of Cordelia Street to I-80*
SON	37	E	170	3:45–6:10	At Route 121*
SON	101	N	100	4:25–6:05	North of East Washington Avenue*
SON	101	N	120	3:50–6:10	At Old Redwood Highway*
SON	101	N	200	2:10–5:25	South of Route 116 to Golf Course Road
SON	101	N	1,770	1:10–5:35	Route 12 to north of College Avenue
SON	101	S	1,050	2:40–6:10	North of Mendocino Avenue to 5th Street

* Segment monitored in 2003

County abbreviations: ALA=Alameda; CC=Contra Costa; MRN=Marin; SCL=Santa Clara; SF=San Francisco, SM=San Mateo; SOL=Solano; SON=Sonoma

Appendix C:
Injury and Fatal Motor Vehicle Collisions Involving Bicyclists and Pedestrians by Bay Area Jurisdiction, 2004

Injury and Fatal Motor Vehicle Collisions Involving Bicyclists and Pedestrians by Bay Area Jurisdiction, 2004

JURISDICTION	PEDESTRIAN-INVOLVED COLLISIONS				BICYCLE-INVOLVED COLLISIONS			
	2004 INJURY	2004 FATAL	2004 INJURY and FATAL	1999–2003 ANNUAL AVG. INJURY and FATAL	2004 INJURY	2004 FATAL	2004 INJURY and FATAL	1999–2003 ANNUAL AVG. INJURY and FATAL
Alameda County								
Alameda	28	3	31	34	32	0	32	30
Albany	9	0	9	7	4	0	4	7
Berkeley	101	4	105	113	132	0	132	136
Dublin	8	0	8	7	5	0	5	4
Emeryville	5	1	6	8	4	0	4	5
Fremont	38	3	41	63	47	1	48	61
Hayward	62	2	64	76	39	0	39	51
Livermore	12	0	12	21	29	0	29	33
Newark	3	0	3	10	8	1	9	11
Oakland	281	9	290	298	118	0	118	166
Piedmont	1	0	1	2	0	0	0	2
Pleasanton	11	1	12	12	23	0	23	17
San Leandro	28	2	30	33	23	0	23	21
Union City	8	1	9	16	9	0	9	11
Unincorporated Alameda County	33	3	36	57	33	0	33	37
Alameda County Total	**628**	**29**	**657**	**757**	**506**	**2**	**508**	**592**
Contra Costa County								
Antioch	18	0	18	21	10	0	10	21
Brentwood	5	0	5	7	3	0	3	5
Clayton	1	0	1	1	3	0	3	1
Concord	36	0	36	41	51	1	52	46
Danville	11	0	11	5	11	0	11	11
El Cerrito	11	1	12	14	8	0	8	10
Hercules	2	0	2	1	1	0	1	1
Kensington	0	0	0	1	2	0	2	2
Lafayette	2	0	2	3	2	0	2	5
Martinez	7	0	7	8	4	0	4	7
Moraga	0	0	0	1	2	0	2	2
Oakley	2	0	2	2	2	0	2	3

Injury and Fatal Collisions Involving Bicyclists and Pedestrians, 2004 (continued)

JURISDICTION	PEDESTRIAN-INVOLVED COLLISIONS				BICYCLE-INVOLVED COLLISIONS			
	2004 INJURY	2004 FATAL	2004 INJURY and FATAL	1999–2003 ANNUAL AVG. INJURY and FATAL	2004 INJURY	2004 FATAL	2004 INJURY and FATAL	1999–2003 ANNUAL AVG. INJURY and FATAL
Orinda	3	0	3	3	1	0	1	3
Pinole	7	2	9	6	3	0	3	3
Pittsburg	11	2	13	21	5	0	5	8
Pleasant Hill	9	0	9	12	20	0	20	19
Richmond	38	0	38	55	20	1	21	32
San Pablo	14	0	14	22	14	0	14	12
San Ramon	2	0	2	5	3	0	3	7
Walnut Creek	18	0	18	21	17	2	19	28
Unincorporated Contra Costa Co.	30	2	32	36	44	0	44	37
Contra Costa County Total	**227**	**7**	**234**	**287**	**226**	**4**	**230**	**262**
Marin County								
Belvedere	0	0	0	0	0	0	0	0
Corte Madera	2	0	2	3	11	0	11	10
Fairfax	3	0	3	3	2	0	2	4
Larkspur	5	0	5	3	4	0	4	6
Mill Valley	1	0	1	4	3	0	3	5
Novato	15	0	15	15	10	0	10	24
Ross	2	0	2	1	0	0	0	1
San Anselmo	8	0	8	6	12	0	12	7
San Rafael	29	0	29	36	37	0	37	37
Sausalito	0	0	0	3	7	0	7	16
Tiburon	1	0	1	1	2	0	2	1
Unincorporated Marin County	8	0	8	11	27	0	27	36
Marin County Total	**74**	**0**	**74**	**86**	**115**	**0**	**115**	**148**
Napa County								
American Canyon	0	0	0	1	2	0	2	3
Calistoga	1	0	1	3	3	0	3	2
Napa	25	1	26	29	47	0	47	37
Saint Helena	5	0	5	3	1	0	1	4

Injury and Fatal Collisions Involving Bicyclists and Pedestrians, 2004 (continued)

JURISDICTION	PEDESTRIAN-INVOLVED COLLISIONS				BICYCLE-INVOLVED COLLISIONS			
	2004 INJURY	2004 FATAL	2004 INJURY and FATAL	1999–2003 ANNUAL AVG. INJURY and FATAL	2004 INJURY	2004 FATAL	2004 INJURY and FATAL	1999–2003 ANNUAL AVG. INJURY and FATAL
Yountville	0	0	0	1	0	0	0	0
Unincorporated Napa County	0	1	1	3	18	0	18	12
Napa County Total	**31**	**2**	**33**	**41**	**71**	**0**	**71**	**58**
San Francisco County								
San Francisco County Total	**710**	**20**	**730**	**901**	**321**	**2**	**323**	**357**
San Mateo County								
Atherton	3	0	3	3	4	0	4	4
Belmont	5	0	5	6	4	0	4	8
Brisbane	2	0	2	1	0	0	0	1
Burlingame	12	0	12	16	10	0	10	8
Colma	1	0	1	3	0	0	0	1
Daly City	30	2	32	36	8	0	8	10
East Palo Alto	17	0	17	21	11	0	11	13
Foster City	3	0	3	2	5	0	5	5
Half Moon Bay	1	2	3	3	3	0	3	6
Hillsborough	2	0	2	1	1	0	1	2
Menlo Park	16	0	16	18	20	0	20	19
Millbrae	10	2	12	8	2	0	2	3
Pacifica	5	0	5	9	5	0	5	4
Portola Valley	0	0	0	0	0	0	0	2
Redwood City	31	4	35	32	28	0	28	40
San Bruno	14	0	14	19	10	0	10	11
San Carlos	9	0	9	7	6	0	6	8
San Mateo	42	1	43	46	42	0	42	48
South San Francisco	23	0	23	27	13	0	13	19
Woodside	0	0	0	0	5	1	6	9
Unincorporated San Mateo Co.	11	2	13	14	30	0	30	36
San Mateo County Total	**237**	**13**	**250**	**273**	**207**	**1**	**208**	**256**

Injury and Fatal Collisions Involving Bicyclists and Pedestrians, 2004 (continued)

JURISDICTION	PEDESTRIAN-INVOLVED COLLISIONS				BICYCLE-INVOLVED COLLISIONS			
	2004 INJURY	2004 FATAL	2004 INJURY and FATAL	1999–2003 ANNUAL AVG. INJURY and FATAL	2004 INJURY	2004 FATAL	2004 INJURY and FATAL	1999–2003 ANNUAL AVG. INJURY and FATAL
Santa Clara County								
Campbell	13	0	13	8	16	0	16	14
Cupertino	7	0	7	15	21	0	21	31
Gilroy	17	1	18	11	14	0	14	10
Los Altos	4	0	4	9	22	0	22	24
Los Altos Hills	1	0	1	0	2	0	2	6
Los Gatos	5	1	6	8	15	0	15	13
Milpitas	13	0	13	14	18	0	18	19
Monte Sereno	0	0	0	0	1	1	2	1
Morgan Hill	7	0	7	5	9	0	9	7
Mountain View	26	0	26	21	44	0	44	50
Palo Alto	21	0	21	26	56	0	56	74
San Jose	312	18	330	347	318	3	321	300
Santa Clara	40	0	40	28	15	0	15	34
Saratoga	2	1	3	3	19	0	19	14
Sunnyvale	15	0	15	30	51	0	51	47
Unincorporated Santa Clara Co.	21	0	21	13	29	3	32	32
Santa Clara County Total	**504**	**21**	**525**	**539**	**650**	**7**	**657**	**676**
Solano County								
Benicia	6	0	6	7	3	0	3	5
Dixon	4	0	4	4	8	0	8	4
Fairfield	32	0	32	41	37	1	38	36
Rio Vista	0	0	0	1	1	0	1	1
Suisun City	5	0	5	4	1	0	1	6
Vacaville	15	0	15	13	13	0	13	20
Vallejo	59	3	62	51	22	0	22	31
Unincorporated Solano County	4	1	5	5	4	0	4	5
Solano County Total	**125**	**4**	**129**	**126**	**89**	**1**	**90**	**107**

Injury and Fatal Collisions Involving Bicyclists and Pedestrians, 2004 (continued)

JURISDICTION	PEDESTRIAN-INVOLVED COLLISIONS				BICYCLE-INVOLVED COLLISIONS			
	2004 INJURY	2004 FATAL	2004 INJURY and FATAL	1999–2003 ANNUAL AVG. INJURY and FATAL	2004 INJURY	2004 FATAL	2004 INJURY and FATAL	1999–2003 ANNUAL AVG. INJURY and FATAL
Sonoma County								
Cloverdale	1	0	1	1	2	0	2	4
Cotati	2	0	2	2	5	0	5	3
Healdsburg	4	0	4	2	7	0	7	4
Petaluma	15	1	16	23	35	0	35	27
Rohnert Park	7	0	7	9	10	0	10	11
Santa Rosa	48	1	49	56	62	1	63	74
Sebastopol	7	0	7	6	7	0	7	7
Sonoma	1	1	2	6	2	0	2	4
Windsor	5	0	5	3	3	0	3	3
Unincorporated Sonoma County	22	1	23	25	40	2	42	37
Sonoma County Total	**112**	**4**	**116**	**134**	**172**	**3**	**175**	**175**
Bay Area Total	**2,648**	**100**	**2,748**	**3,145**	**2,357**	**20**	**2,377**	**2,631**

Appendix D:
Pavement Condition of Bay Area Jurisdictions, 2004

Pavement Condition Index (PCI) for Bay Area Jurisdictions

2004 Average PCI	Jurisdiction	2003 Average PCI
Very Good		
87[1]	Brentwood	82
85	Contra Costa County (unincorporated)	86
85	Los Altos	83
84	Dixon	70
84	Oakley	87
84	City of Santa Clara	86
83[1]	Belvedere	82
83	Sunnyvale	84
82	Gilroy	73
80	Campbell	78
79	Concord	78
79	Dublin	81
79	Foster City	79
79	Livermore	75
79[1]	City of Sonoma	74
78	Fairfield	80
78	Newark	76
76[1]	American Canyon	77
76	Danville	75
76	Hercules	66
76[1]	Mountain View	75
75	Vacaville	73
Good		
74	Corte Madera	65
74[1]	Los Altos Hills	71
74	Redwood City	74
74	San Ramon	74
73	Pleasanton	65
72[1]	Pinole	75
72[1]	Windsor	76
71[1]	Atherton	68
71	Benicia	70
71	Fremont	72

2004 Average PCI	Jurisdiction	2003 Average PCI
Good		
71	Rohnert Park	69
70	Antioch	72
70	Milpitas	69
70	Pacifica	72
70[1]	Yountville	66
69	Brisbane	69
69	Cotati	68
69[1]	Daly City	70
69	Santa Clara County (unincorporated)	73
69	Saratoga	65
68	Clayton	70
68	Cupertino	70
68	Sausalito	61
67[1]	Berkeley	63
67	Burlingame	65
67	Cloverdale	67
67	Hayward	65
67[1]	Los Gatos	69
67	Piedmont	67
67	Pittsburg	58
67	Sebastopol	58
66	Fairfax	58[2]
66	Healdsburg	66
66	Mill Valley	62
66	Portola Valley	68
66	San Pablo	64
65	City of Alameda	68
65[1]	Morgan Hill	72[2]
64	Moraga	61
64[1]	Novato	66
64	Petaluma	64
64[1]	San Carlos	71
64	City and County of San Francisco	65[2]

Pavement Condition Index (PCI) for Bay Area Jurisdictions (continued)

2004 Average PCI	Jurisdiction	2003 Average PCI
Good		
64[1]	San Jose	67
64	San Leandro	63
64[1]	San Rafael	63
64	Santa Rosa	65
64	Woodside	64
63	Alameda County (unincorporated)	75
63	East Palo Alto	62
63	Hillsborough	50
63[1]	South San Francisco	70
63[1]	St. Helena	57
62[1]	Ross	62
62	San Mateo County (unincorporated)	63
61	Albany	59
61	Belmont	62
61[1]	El Cerrito	58
61	Millbrae	63
60	Menlo Park	58
60	San Anselmo	61
Fair		
59	Napa County (unincorporated)	59
59	Pleasant Hill	61
58	Martinez	61
58	Solano County (unincorporated)	60
58	Tiburon	61
57[1]	San Bruno	64
56	Oakland	57[2]
55	Calistoga	63
55	Half Moon Bay	55
55[1]	Larkspur	55
55[1]	Suisun City	61
54	Lafayette	57[2]
54[1]	San Mateo	55
Fair		
54	Vallejo	54
53	Monte Sereno	52
53[1]	Rio Vista	60
52	City of Napa	55
50[1]	Marin County (unincorporated)	53
47	Colma	50
47[1]	Richmond	53
46	Orinda	74
Poor		
44[1]	Sonoma County (unincorporated)	47
No Data		
NA	Emeryville	69
NA	Palo Alto	NA
NA	Union City	NA
NA	Walnut Creek	NA

Source: Metropolitan Transportation Commission

2004 PCI scores based on pavement databases updated in 2004 unless noted.

2003 PCI score is based on inspections between 1999 and 2003.

1 PCI score is an estimate based on inspections done between 2001 and 2003. (See note on page 49.)

2 Score has been correlated to the PCI scale from an alternate pavement management system.

NA = not available

Credits

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